

MANUAL OF
HOUSEHOLD WORK
AND
MANAGEMENT

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MANUAL OF HOUSEHOLD WORK
AND MANAGEMENT

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LONGMANS, GREEN, AND CO.

LONDON, NEW YORK, BOMBAY, AND CALCUTTA

MANUAL
OF
HOUSEHOLD WORK
AND
MANAGEMENT

BY
ANNIE BUTTERWORTH

DOMESTIC ARTS DEPARTMENT, UNIVERSITY COLLEGE OF SOUTH WALES
AND MONMOUTHSHIRE, CARDIFF

THIRD EDITION, REVISED AND ENLARGED

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1913

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THE NEW AMERICAN

P R E F A C E

I HAVE been requested by Miss Butterworth to write an introduction to this MANUAL OF HOUSEHOLD WORK AND MANAGEMENT.

I have the greatest pleasure in doing so, because I believe that this Manual will prove of benefit to all classes of homes.

It has been written by one who is a specialist on the subject, and who has spent many years in giving instruction in the practical management of a house, etc., to all classes of women.

The various subjects included in the term "household work and management" have been dealt with in this small book.

It contains valuable information on the proper management of a house, obtained by practical experience.

It is a book that will be useful, not only to those who propose training as teachers of the domestic sciences, but to all those who undertake the management of a home.

I have confidence, therefore, in recommending this little book to all those who desire to study the science as well as the practice of household management.

HESTER DAVIES,

*Superintendent
Domestic Arts Department,
University College,
Cardiff.*

AUTHOR'S PREFACE

THE rarity of text-books containing the details of household work is the *raison d'être* of this little manual. By those who are experienced in the management of the home, much of the information here given may be deemed superfluous ; but to the tyro no detail is unimportant. It is in the neglect of apparently small and obvious points that many irritating mistakes arise ; and therefore, at the risk of wearisome repetition, every attention has been paid in this manual to those trifles that make perfection, which is in itself no trifle.

No attempt is made to supplant the goodly tomes on Domestic Economy already issued, but to supply a handy book of reference containing all the particulars of household management. It is written, primarily, for students qualifying for the Teacher's Diploma of Housewifery ; but in the earnest hope that it may also be of assistance to many entrusted with the care and comfort of a home.

ANNIE BUTTERWORTH.

August, 1902.

PREFACE TO SECOND EDITION

THE sale of the first edition of 6000 copies of this manual proves that it has not only been found useful by students training in Housewifery, but with many "entrusted with the care and comfort of home."

The gratifying notices of the Press, and the favourable testimonials of the Superintendents of Domestic Science Schools, have encouraged the author to issue a second edition, with additions which, it is hoped, will increase the usefulness of the work.

CARDIFF, 1906.

PREFACE TO THIRD EDITION

THE increased attention bestowed on the public health by National, County, and Municipal Councils, and the larger space devoted to this subject in the curriculum of the Schools of Domestic Science, have made it needful to give further information on Hygiene in this manual. Advantage has therefore been taken of the issue of a third edition to insert such information, and the most recent requirements of parliamentary and provincial authorities in reference to the health of the people.

CARDIFF, 1913.

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MANUAL OF HOUSEHOLD WORK AND MANAGEMENT

CHAPTER I

Choice of a House

*Rent—Neighbourhood—Soil—Aspect—Slope—Size of Rooms—
Various Details—Need of Agreement—Sale of Fixtures—
Regulations respecting Fixtures—Neglect—Infection—
Notice—Fire Insurance—How to act in case of Fire.*

EVERY text-book on Domestic Economy enters so thoroughly into this question that it is only necessary here to mention the various considerations in a most cursory manner.

RENT. One-eighth of the income is usually considered to be the proportion to spend on this item, it being most unwise to cripple the resources of a household by taking a house beyond the means at disposal. No house, however apparently charming and desirable, is cheap if it is not in good sanitary condition and in a healthy situation.

NEIGHBOURHOOD. This is often influenced by the rent. If possible, a house should be conveniently near to the railway station, or trams, or to the occupant's place of business. The proximity of an overcrowded churchyard, or unwholesome trade premises, marshy land or stagnant water, should be avoided, also narrow dark streets facing north, houses closely hemmed in by trees or in a low, damp situation.

ASPECT. A south or south-west aspect is the most desirable, as rooms facing north are cold and cheerless, while those facing east are usually draughty and most unsuitable for persons liable to neuralgia.

SOIL. It is most necessary that the house should be built on dry soil, and for this reason a fair elevation above the surrounding land is advisable. Gravel or sand forms a very healthy site, because moisture can readily drain away through these porous materials. Rock, sandstone, and chalk come next in merit for the same reason. Dense clays are most unhealthy, especially for those liable to consumption or to rheumatism.

"Made soil," which is principally ash-bin refuse, is, needless to say, most undesirable, as impure gases and disease germs must inevitably rise from it.

THE SLOPE on which a house is built is of the utmost importance, as even gravel if low-lying may contain a large quantity of water. Damp soil necessarily renders a house colder, so that it is less economical (more fuel being required) as well as unhealthy, phthisis, ague, croup, and dysentery being among the complaints.

The vegetation affords a little guide as to the character of the soil—grass is greenest on a damp soil; rhododendrons are larger and blossom more freely on a peaty, sandy soil; laurels, bays, and laurustinus will not flourish in impure air; while stunted oak trees indicate a depressing atmosphere. Some plants cleanse and drain the soil, notably eucalyptus trees and sunflowers.

SIZE OF THE ROOMS. Persons who habitually live in very small rooms never enjoy vigorous health. They are usually listless, apathetic, and suffer from headache and loss of appetite. For every individual at least 1200 cubic feet are necessary. In order to ascertain the cubic space of any room, simply multiply together the three dimensions of length, breadth, and height.

THE SANITARY ARRANGEMENTS must especially be well looked after: their condition is best judged by an independent sanitary expert. A plan of the house drainage should be obtained from the landlord.

Before taking a house, the following details should be remembered :—

1. All particulars of the water supply should be obtained, and cisterns should be examined.

2. If there are any ventilators, such as Tobin's tubes, or Sheringham's valves, etc., on the premises, they should be put in working order ; window-sashes, cords, and fastenings should be looked after, all windows being made to open at the bottom as well as the top.

3. The kitchen, oven, and boiler flues should be inspected. Mantelpieces should be examined for signs of smoky chimneys, shown in discolouration of marble or woodwork. A cowl, or some contrivance for regulating the draught, will usually remedy this defect, unless the house is adjacent to some much higher building, which may cause a down-draught.

4. The roof and spouting should be thoroughly overhauled.

5. Gas-pipes should be tested, locks and bolts tried, satisfactory connection between the bells ascertained, signs of housepests should be looked for, also signs of damp or any peculiar mouldy smell.

LANDLORD AND TENANT

Almost every house of the better class (not held under a lease) is let from year to year ; that is, the tenancy cannot terminate except by special consent until the end of six months' notice, expiring at the time of the year when the tenancy begins.

Verbal agreements for tenancies are binding for any period not exceeding three years, if there is ample proof of what was agreed. If both parties are quite content with the terms, such an agreement is effectual, but written agreements are desirable, because no mistake through forgetfulness or misunderstanding is then possible. The tenant agrees to pay the rent in four equal instalments each year, on the quarter days.

A tenancy specified beforehand to extend over three years can only be treated by lease. Every one taking a house on lease should insist on being secured by the landlord from all

arrears that may be due on account of rent, rates, and taxes. If a landlord undertakes when letting a house to do certain specified repairs, the tenant should see that they are effected before he takes possession. Rent is payable at sunrise of the day appointed for payment, but the tenant is entitled to the whole day until sunset wherein to pay.

In matters of rent night time does not count, so that rent is not legally in arrears until sunrise of the day after it becomes payable.

Sale on credit of fixtures or anything of that nature by an outgoing tenant to an incoming tenant is a somewhat risky procedure. The sale should always be for cash down before the end of the outgoing term, because if such property remains without being paid for it cannot be sued upon, as it does not then belong to the incoming tenant but to the landlord.

FIXTURES. The landlord's fixtures usually consist of cupboards, grates, and venetian blinds, while the tenant usually provides spring blinds, curtain poles and rods, shelves, hanging lamps, and sometimes gas-fittings. Everything fixed by a tenant that can be moved without creating dilapidation may be removed if not incorporated with the premises. As a rule, everything that can be disengaged by drawing nails and screws, actually provided at the tenant's own expense, may be taken ; but if the fixing be by mortar or cement, the article so fixed must pass to the landlord.

BUILDINGS. Everything built or erected by the tenant as additions to the premises and incorporated therewith must be suffered to remain ; but if any structure (as a conservatory) be built upon timber course, resting upon the earth without penetrating it, or upon a dwarf foundation, the superstructure may be taken away.

PLANTS. An occupier is not legally entitled to remove any trees, shrubs, plants, or roots, whether planted by himself or not. Ripe fruit and vegetables may be taken, but unripe fruit and immature vegetables must be left.

NEGLECT. Whether there be any stipulation or not, the tenant is liable for any dilapidation or damage that arises from his wilful neglect ; especially if he abandons the premises before

the end of his term, and if the grates are consequently destroyed by rust, or the premises injured by trespassers.

INFECTION. Outgoing tenants are heavily fined for leaving premises infected unless they give notice of infection to the landlord.

The letting of a house or room where infectious disease has been within six months, without thorough disinfection, also involves a heavy penalty.

ODD DAYS. When the agreement is executed a few days before a quarter day, the advantage of those few days is generally given to the tenant rent free, but if a few days after quarter day the rent of these days is not deducted from the first quarter's instalment.

NOTICE. It must never be forgotten that if notice is not given at the right time the tenant is legally bound to go on for the next period. Cases often occur where the notice has only been delayed a single day with this result. This is a safeguard for landlords, and shows tenants the need of accuracy and punctuality.

FIRE INSURANCE

It is advisable that every householder should insure his property and goods at their full value. One or two points must be borne in mind in order to avoid any mistake which might render the policy useless.

1. An insurer must not so alter his premises that they no longer tally with the description in the policy.

2. A fire insurance only protects goods so long as they remain in the same house where the policy was effected. Therefore, on a change of residence, notice should be given to the insurance agent, and the policy altered accordingly.

3. A house should be insured by the landlord, the tenant insuring the contents.

4. Overstating the value of property, or underrating its proximity to risk, renders the policy null and void.

5. Some kinds of property are not included unless special mention is made; for instance, jewellery should be insured as a separate item. Some companies do not include glass and china in furniture. A condition that no piano or picture shall

be rated over £10 is often laid down ; the best way of avoiding controversy is to have the goods valued in the presence of the agent at the time when the policy is drawn up.

WHAT TO DO IN CASE OF FIRE

The fire engines should be sent for immediately.

Should the fire break out at night, when the occupants of the house are in bed, on being roused they should wrap themselves in blankets, drawing a wetted silk handkerchief or piece of wet flannel over their faces, as this to a large extent serves as a protection.

If it is impossible to walk through the smoke, crawling on hands and knees should be attempted, as there is always a space of from eight to ten inches of pure air close to the ground.

If ascent or descent on the staircase is impossible, it is advisable that all members of the household should make their way into the front rooms. If in extremity and no fire-escape is at hand, sheets should be fastened together, one being made fast to some heavy piece of furniture, and escape be thus effected. Keep all doors and windows shut as much as possible, as the draught fans the flames.

If a woman's clothes ignite, she should throw herself down and roll over and over on the floor in a rug, strip of carpet, heavy curtain, or any substance which will smother the flame. Sparks fly upwards and flames ascend ; ignition from below mounts up with fearful rapidity, and disfigurement of face, neck, head, and arms is much more frequent than of the lower limbs. The moment the body is in a horizontal position the flames still ascend, but only into the air, not curling round the upper part of the victim ; also, not having so much to feed on, the flame can more easily be smothered.

COMPARATIVE ADVANTAGES AND DISADVANTAGES OF FLATS

1. The rates and taxes are included in the rent, only the lighting is additional. 2. Less furniture and fewer servants are required, as the rooms are all on one floor. 3. It is easier to check the servants, seeing when they go in and out, and preventing their giving or selling any perquisites. 4. It is safer

when the mistress is absent than an ordinary house would be, as the porter takes it under his charge. On the other side, there are few conveniences for storing, the servants' accommodation is generally very poor, and all sounds are heard by neighbouring residents, so that where there are children the flat is inconvenient.

RATES

Assessment means the official valuation of income or property for purposes of taxation. Returns are made periodically by the occupiers of the amount of rent paid, and on these returns the assessment is made. This is based on no definite principle, necessity being the chief factor, so that it is high or low according to the expenditure of the corporation. The term "rates" includes (1) the Poor Rate, (2) the General District Rate, and (3) the Water Rate.

The money raised by the **POOR RATE** is expended on relief of the poor, other expenses of the guardians, intermediate education, technical instruction, elementary education, higher grade schools, continuation evening classes, public libraries, salaries, etc. This rate varies in different towns; in Cardiff in 1913 it is $\frac{3}{10}$ in the £1 for the year, paid half yearly.

THE GENERAL DISTRICT RATE in Cardiff (1913) now amounts to $\frac{3}{6}$ in the £1, or $\frac{1}{9}$ each half year. This rate is expended on the following items: highway maintenance, street improvements, sewers, public-street lighting, electric lighting, the laying out and keeping up of various parks, sanatoria, scavenging, watering of roads, drinking-fountains, markets, public baths, museums, port sanitary authority, salaries, etc.

The **WATER RATE** amounts to 5 % on the assessment of the rent. This rate is always chargeable on any furnished house, even if unoccupied. Three months' notice should be given before leaving a house. Occupiers changing residence, taking fresh premises, or giving up occupation, should at once send full particulars, with dates, to the chief collector, so that the rate-book may be altered accordingly.

TAXES, OR IMPERIAL TAXATION

Assessment is required for (1) the Land Tax, (2) Inhabited House Duty, (3) Income Tax, and (4) Estate or Death Duty.

Houses at a rental of £20 per annum or under are exempt from the **INHABITED HOUSE DUTY**. This varies according to the value of the house, being—

3d.	in the £1	from £20 to £40	yearly.
6d.	"	" £40 "	£60 "
9d.	"	" £60 "	£100 "

and so on.

INCOME TAX. Income derived from landed property, including houses, is assessed at its annual value, less one-eighth off for local rates, and one-sixth off for repairs. Thus a house let at £40 yearly would be assessed thus :—

	£	s.	d.
$\frac{1}{8}$ of £40 =	5	0	0
$\frac{1}{6}$ of £40 =	6	13	4
The two together =	11	13	4
	£	s.	d.
	40	0	0
	11	13	4
	<hr/>		
	28	6	8

yearly assessment.

Total exemption from this tax may be claimed by those whose income is under £160 yearly. At present the income tax is $\frac{1}{2}$ in the £1; but abatement may be claimed up to £700 yearly in the following manner :—

Incomes under £400	yearly	are allowed a deduction of	£160
Those between £400 and £500	"	"	£150
" " £500 "	£600	"	£120
" " £600 "	£700	"	£70

That is to say—those possessing an income of £400 only pay the income tax on £240, and so on. By the Finance (1909-10) Act, 1910, a further tax called super-tax is payable on incomes exceeding £5000 at 6d. in the £1 on the excess over £3000.

CHILD EXEMPTION

Where a person's total income from all sources, though exceeding £160, does not exceed £500, and he has a child or children living and under the age of sixteen at the commencement of the year for which the income tax is charged, he is

entitled in respect of every such child to relief equal to the amount of income tax upon £10. (Child includes step-child also.)

ESTATE DUTY is leviable upon the principal value of all property, real or personal, which passes on the death of a person, including any money or investment representing the proceeds of sale which passes, either immediately on the death or after any interval; it also includes gifts of property made by the deceased within a year of death. Immovable property situate out of the United Kingdom is not chargeable with estate duty. Movable property, situate out of the United Kingdom, is not chargeable if the deceased was domiciled *out* of the United Kingdom at the time of death. It is chargeable, however, if the death occurred in the United Kingdom.

Estate duty is not payable on the property of seamen, marines, or soldiers, who are slain or die in His Majesty's service, or on any pension or annuity payable by the Government of British India to the widow or child of any deceased officer of such Government.

Where the gross value of the property, real and personal, exceeds £100 but does not exceed £300, a fixed duty of 30/- should be paid; where it exceeds £300 but not £500, a fixed sum of 50/- is payable. Above that the scale is—

From £500 to	£1000	a duty of 2 per cent.
£1000 „	£5000	„ 3 „
£5000 „	£10,000	„ 4 „
£10,000 „	£20,000	„ 5 „
£20,000 „	£40,000	„ 6 „
£40,000 „	£70,000	„ 7 „
£70,000 „	£100,000	„ 8 „
and so on to £1,000,000	„	14 „

Legacy duty and Succession duty are also payable in most cases, and Settlement Estate duty (at the fixed rate of two per cent.) sometimes.

NATIONAL INSURANCE ACT

The aim of this Act is the “insurance against loss of health, and for the prevention and cure of sickness.”

1. It provides (with certain exceptions) compulsory insurance for workers of either sex, whether British subjects or not, whose wages do not amount to more than £160 a year.

2. It provides compulsory insurance for workers engaged in manual labour, even though they earn more than £160 a year.

3. It provides voluntary insurance for other persons, but in no case must their income from all sources exceed £160.

AGE. The workers to whom the Act applies are those between the ages of 16 and 70.

BENEFITS

1. Medical attendance throughout life, including medicines and medical or surgical appliances.

2. Periodical payments during sickness.

3. Periodical payments during disablement.

4. Treatment in sanatoria when suffering from consumption.

5. Maternity benefit.

WEEKLY CONTRIBUTIONS

<i>Men.</i>			<i>Women.</i>		
Worker	...	4d.	Worker	...	3d.
Employer	...	3d.	Employer	...	3d.
State	...	2d.	State	...	2d.
		—			—
		9d.			8d.

CHAPTER II

Larder

Position and Arrangement—Cleaning—Butter, Milk, Bacon, Lard, Bread, Cheese, Fresh Eggs—To store Eggs—To store Butter—Potatoes and Root Vegetables—Onions—Apples—Choice of Apples—Pears—Lemons—Vegetable Rack.

Description of Stores—Jams, Soap, Flour, Oatmeal, Grains, Coffee, Sugars, Tea, Candles, Starch, Soda, Honey, Almonds, Dried Fruits, Herbs.

POSITION AND ARRANGEMENT. The larder should be at a distance from the kitchen range and hot-water pipes, and should have a northerly aspect to ensure coolness and absence of bright sunshine ; it should, however, be dry, light, well ventilated and scrupulously clean. The ceiling should be limewashed frequently, the walls if not tiled being treated in the same manner. Slate shelves are preferable to wood ; but in any case there should be a slate slab on which the butter and milk may be placed, as these articles are easily contaminated. If the sun's rays strike on the window a cloth kept well moistened should be fastened over it in such a way that the air is not excluded. A pail of cold water standing on the floor also lowers the temperature.

CLEANING OF LARDER. No brushing should take place near food ; the shelves should be wiped daily with a damp cloth to gather up the dust, and scrubbed (as well as the floor) with carbolic soap weekly, care being taken that a dry day be chosen. The window should be open constantly ; in fact, perforated zinc gauze is better than glass, as fresh air can thus be always admitted. The upper part of the door should also be formed of this material, to ensure a through draught. Hooks for hanging meat should be placed in the ceiling in line with this draught. The floor, if possible, should be of stone. The mistress should inspect the larder daily, to see that all odds and ends of food are utilized, and that none are

overlooked and allowed to become sour. Wire covers should be provided for covering cold meats, etc., butter and milk being covered with fine muslin; the latter should be kept in a shallow milk-bowl, as it remains sweet longer than in a jug. An ice chest or refrigerator, costing £5 for a small size, is a great convenience and an economy.

BUTTER. In hot weather butter may be placed in a basin which is allowed to stand in a larger bowl of cold water containing saltpetre, the ends of the muslin covering resting in this so that the muslin is always damp. An inverted unglazed flower-pot placed in a soup plate containing water, and covered with a wet cloth sufficiently large to rest in the water, forms an admirable receptacle for butter or lard in hot weather.

BACON AND HAM should be tied up in brown paper, and suspended from the ceiling.

LARD should be covered closely, and kept in a crock or on a plate covered with a basin.

BREAD should be kept in a closely covered earthenware bread-pan, which has a hole in the lid for ventilation. Daily it must be wiped out to prevent it becoming musty; weekly it must be washed and well dried.

CHEESE. Where a large piece is bought, more than can be conveniently placed in a cheese-stand, a buttered paper should be tied over the cut surfaces, the whole tied up in brown paper, and an earthenware pan inverted over it to keep off mice. Care must be taken that it, or any other strong-smelling food, is not placed in close proximity to milk or butter, as both these foods readily acquire a taint.

FRESH EGGS should be kept in a basket. If held up to the light, an egg if fresh should be clear, if thick it is stale. Eggs are cheapest in the late spring. They may be preserved for future use by rendering them air-tight to prevent decomposition. The simplest treatment is to coat them thoroughly with lard or butter, then pack them in jars of dry salt, narrow ends downwards. Tins of water glass ($4\frac{1}{2}d.$) are easily procured, the contents are mixed with cooled boiled water and simply poured over the eggs, which are allowed to remain in this liquid until required for use.

TO STORE BUTTER. Butter may be bought cheaply near

the end of the summer. Into every pound should be worked $\frac{1}{2}$ oz. of salt, $\frac{1}{2}$ oz. of saltpetre, and $\frac{1}{2}$ oz. of castor sugar. When these ingredients are thoroughly kneaded into the butter it should be pressed into a jar, and a piece of calico laid over it; then a layer of salt, another piece of calico, and finally the lid, which will prevent the admission of any air.

FRUIT AND VEGETABLES

POTATOES may usually be purchased cheaply about the end of August; they should be kept heaped up in a dark cellar, covered with straw. Attention is necessary to remove any decaying ones and to break off sprouts. Artichokes, carrots, parsnips, and turnips are all stored in a similar manner.

ONIONS should be hung by the stalks, or strung on ropes after drying in the sun; they should be hung from the ceiling. Shallots, chives, and garlic are all thus suspended.

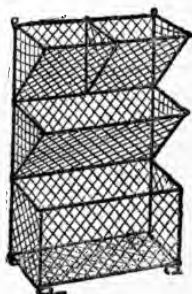
APPLES should be laid on the floor or shelf, and not allowed to touch one another. They should be looked over constantly, and any decaying ones removed. Apples with rough skins, such as russets, keep best.

CHOICE. The heaviest apples are always the best. Choose those which on being pressed with the finger and thumb yield with a slight crackling noise.

PEARS may be laid separately on shelves or hung by their stalks.

LEMONS may be rolled in soft paper and laid on a shelf or suspended in a net. When the juice has been extracted, the peel may be chopped finely, dried, and tied down in pots to serve as a flavouring.

Fruit and vegetables should if possible be kept in a fruit-room, as the smell of apples and onions renders both unfit occupants for either a larder or storeroom. An unused attic may sometimes be reserved for this purpose. Where only small amounts of vegetables are purchased for immediate use, the new hygienic vegetable racks are useful; they take very little room, as they



VEGETABLE RACK.

can be hung against a wall. They contain four bins, and cost from 11/6 to 16/6 according to size.

STORES AND STOREROOM

It is an undoubted economy to buy certain materials in large quantities ; by so doing the price per pound is much less, and the weight of paper bags and the turn of the scales are saved. The poor who buy coals by the hundredweight pay far more than those householders who can lay in a store at summer prices at the end of August. Apples by the barrel, potatoes by the sack, oranges by the box, are much less expensive than when bought in small quantities. The only difficulties are that poorer people have not always the ready-money to lay out, and that they often have little or no space for storage.

STOREROOM. The ideal arrangement is to have a cool, dry room, fitted with cupboards, shelves, drawers, a table, and a pair of scales, so that all stores may be weighed on arrival, and any mistake at once perceived. A store-book should be kept, in which, on the day of arrival, the date of purchase, price, and quantity of all stores should be entered ; in this way it is easy to calculate what quantities are on an average required for a given time, and extravagant use can thus be detected. The mistress should have a stated time for giving out stores, and each maid should bring her jars, etc., to be replenished, asking for anything she may require. A slate and pencil should be hung up, so that any stock which is getting low may be jotted down.

One cupboard should contain grocery stores ; another devoted to cleaning materials, such as soap, soft soap, soda, black lead, metal polish, bathbrick, etc. A shelf should also be given up to supplies of turpentine, methylated spirit, permanganate of potash, etc.

ARRANGEMENT. In a locked cupboard the poisonous liquids should be kept, such as Carbolic Acid, Ammonia, Hydrochloric Acid, and the poisons Oxalic Acid, Salts of Lemon or Salts of Sorrel, each one being carefully labelled and marked "Poison."

One drawer should contain a stock of kitchen paper, dessert and fish d'oyleys ; another a reserve stock of house-flannel, dish-

cloths, dusters, chamois leathers ; and it is wise to have some space kept apart for the supply of various sorts of household brushes.

AIRING. A storeroom should daily be well flushed with air ; the shelves should be wiped daily, and weekly they should be scrubbed, also the floor and table, to ensure that absolute cleanliness which is most essential. Jams and pickles should be placed on the lower shelves, as heated air ascends, and thus they are rendered more liable to fermentation if kept in a high place.

SOAP. This should be bought by the hundredweight, cut into squares with an old knife or piece of string, and kept some time to harden ; it thus becomes drier and does not waste so much when used. Good yellow soap is invaluable, costing 7/6 for 12 bars of 3 lbs. each. Carbolic soap is wholesome and cleansing. Scrubbing soap is economical for its own particular purpose. Soft soap is used for various purposes.

FLOUR. If the storeroom be dry this should be bought in large quantities, and should be kept in an air-tight bin or box, as it readily absorbs moisture which causes mustiness. If the floor be of stone the bin should stand on wooden rests. Good household flour is advisable ; fine flour, though suitable for pastry and superior cakes, does not contain so much nourishment ; the former costs about 2/- per score (20 lbs.).

OATMEAL. This should not be bought in large quantities, as it quickly becomes sour and stale. An air-tight jar is the best receptacle.

GRAINS. These should be kept in covered earthenware jars, labelled with their respective contents. It is not wise to buy large quantities, as insects are apt to intrude.

Split peas, lentils, and haricot beans should only be bought in small quantities, as weevils are sometimes found in them. Egyptian lentils are orange-coloured. German lentils are a brownish green.

COFFEE. Ground coffee or coffee-berries should not be bought in large quantities, because the flavour is very volatile. The best coffee is made by roasting and grinding daily, and by doing this the adulteration of chicory is avoided. Chicory is considered by some people to be an improvement ; it is only

$\frac{1}{2}$ d. an oz. ; it is wiser to add it one's self. The best ground coffee is usually $\frac{1}{8}$ per lb. ; it should be kept in an air-tight tin.

SUGAR. Every kind of sugar should be kept in closely covered tins or jars, preferably the latter. Loaf sugar should be white, heavy, and sparkling : beet sugar has a yellower tinge, and is dull in appearance. The best sugar is in reality the cheapest, as the inferior does not so readily sweeten ; the best is $\frac{2}{3}$ per dozen lbs.

Demerara is economical for sweetening coffee and cooked fruit. A good quality costs $\frac{2}{3}$ per dozen lbs.

Moist brown sugars should not be too powdery or sand-like, but should have a crystalline appearance. They may be bought from $1\frac{1}{4}$ d. per lb. As these sugars are apt to be infested with an insect called the sugar mite, large quantities should not be purchased.

TEA. In nothing else is there so much variety of taste ; a flavour appreciated by one person may be considered nauseous by another. Good tea may be bought from $\frac{1}{4}$, while that at $\frac{2}{6}$ per lb. is good enough for any occasion. It should be kept in an air-tight caddy, and in a cool place, as heat has a tendency to drive off the aroma.

CANDLES should be bought in large quantities in order that they may harden before being taken into use. Should white wax ones become discoloured, they may be restored by being wiped with a cloth dipped in spirit of wine.

STARCH. This should be kept in a dry place, as otherwise it becomes soft ; the tin should be covered to keep out dust.

SODA. This, too, should be carefully covered, as otherwise it forms a white powder ; if damp, it coagulates into one large block.

HONEY. In order to avoid adulteration by glycerine or other foreign constituents, it is safer to buy the honeycomb. The combs can be kept for months in a closely covered earthenware jar, with a cloth inside the cover to ensure total exclusion of air.

ALMONDS. To prevent them losing their crispness and becoming limp and flabby, these should be kept in an air-tight tin. Valencia almonds are used for cooking. Bitter almonds

should be used very sparingly, as they contain prussic acid. Jordan or dessert almonds vary from 2/- to 3/- per lb.

DRIED FRUITS. It is not advisable to buy large quantities of these, except in the late autumn, when the new fruits come in. Sultanias, raisins, and currants should be stoned, washed, picked over, and dried thoroughly and put into jars; this ensures their perfect dryness when required for cooking purposes. Muscatel raisins for dessert run from about 1/- per lb.; Valencias, for cooking, from 5*d.* per lb. These prices vary with the abundance or otherwise of the crop. Figs and prunes also vary much in price and quality. Figs should be carefully looked over, as they are apt to contain maggots.

All dried fruit should be kept air-tight, as otherwise it may become damp and mouldy.

HERBS. These should be tied into bunches and hung in the sun and wind to dry; after which the leaves should be rubbed to a fine powder and stored in carefully labelled glass bottles. If the weather is unfavourable, they may be dried near a fire, but the first method ensures a more perfect flavour.

SPICES. These, being very apt to lose their essential flavour, should never be bought in large quantities; they should be kept in air-tight tins.

NUTMEGS. Of these there are two varieties—the wild and the cultivated; the wild are of a paler colour and greater length.

MACE. Of this there are also two growths; the true is a golden shade, transparent and horny; the wild is a dark-red colour, deficient in taste and smell.

VINEGAR. Of this there are many kinds, such as distilled wine, sugar, malt, and wood vinegar. White wine vinegar is the best, and costs about 3/6 per gallon; good English vinegar may be had from 2/6 to 2/9; strong pickling vinegar 2/-, and ordinary vinegar from 1/- per gallon.

THE CARE OF A MEAT SAFE

This should be suspended either out of doors in a cool shady place, or in a draught in a cool larder. It should be turned out daily, and the shelves wiped with a damp cloth; and weekly

it should be thoroughly scrubbed, rinsed, and allowed to become dry before the food is replaced. Raw meat should be hung up; but if this is not practicable, it should be turned and put on a clean plate daily. It is not advisable for the same safe to contain both fish and meat at the same time; if unavoidable, place them as far from each other as possible. The safe must be carefully closed, and if by any chance the perforated zinc or wire should become torn it must be mended at once, to guard against the admission of dust, flies, or possibly the paw of a predatory cat.

CHAPTER III

Care and Management of a Linen Cupboard

Description of Cupboard—Press—Choice of Table Linen—Towels—Kitchen Towels—Marking—Quantities.

A LINEN cupboard should be in an airy dry situation to prevent mildew, not against an outside wall. If on the ground floor it is easy of access, and if the hot-water pipes run through it the linen is kept aired. The shelves should be from one to one and a half feet apart, taking care that the top one is not so lofty as to escape attention. Underneath each shelf against the wall there should be a line of hooks ; from these by rings should be suspended a piece of white muslin, calico, or preferably glazed holland, the length of the shelf, and sufficiently large to cover the wall space, lie on the shelf and be turned up over the linen on the shelf, thus securing it from all dust. One shelf should be set apart for table linen, another for bed linen, a third for bedroom and bath towels, others for dusters, tea-cloths, oven-cloths, etc. In order that each article may have its fair share of wear, everything as it comes back from the wash should be laid at the bottom of its own respective pile and the clean supply be given only from the top. Regular use is the best way of preventing mildew, and linen wears much longer if it has a rest between use. A memorandum-book should be kept in the linen cupboard, in which is entered the list of contents, the price and date of purchase, also any alteration, addition or diminution. The stock should be counted over regularly, and mended when necessary.

LINEN PRESSES. These are made with drawers underneath, which are useful for storing linen ; they are, however, cheaper without the drawers. Table-cloths and serviettes, if neatly folded in their original creases and put in the press

between meals, look quite smooth and fresh. In the absence of a table press, a cloth may be folded into the three creases lengthwise, and carefully and slowly mangled.

CHOICE OF TABLE LINEN. Double damask, although expensive in the first place, wears so well and always looks so good, that it is the truest economy to purchase it in preference to inferior damask, which soils quickly and loses its beauty after washing.

Large central designs are always more expensive; spots, hailstones, sprigs, and small running patterns always look well and are cheaper. Designs which have been for some time in vogue are less expensive than the most recent ones. Material for table-cloths may be bought by the yard: this has a border on both sides, the ends simply requiring hemming. Strong unbleached damask, which soon becomes white in washing, is the most suitable for kitchen use. In order to avoid a poor appearance, a cloth should be long enough to hang down half a yard at each end. Serviettes should match the table-cloth. For a small household it is wise to buy two table-cloths of the same pattern, in order that the cloth and serviettes may correspond. The price of table-cloths of course varies greatly with the size and quality: very good-looking cloths for ordinary use on a medium-sized table may be bought from 5/9 to 9/-. Strong kitchen table-cloths cost from 3/9. Large extra quality, double damask cloths may be had from 25/- to 30/-, thoroughly good quality $3\frac{1}{2}$ yards long from £2; very large cloths for special occasions, measuring 7 yards in length, cost about £4.

SERVIETTES. These can be had in three sizes, 22, 27, and 31 inches square; the medium size is the most usual. If very stiffly starched they wear out much more quickly, are apt to slip off the knees, and are almost useless; but for fanciful folding stiffness is necessary. When showing signs of wear, they should be folded into four instead of three creases for ironing. Those of medium quality cost from 10/11 per dozen.

TOWELS. For this purpose linen is of far more practical use than cotton, which, although it may look promising in the shops, does not quickly absorb moisture, and soon becomes poor and limp. Linen huckabuck is most satisfactory for daily

use: the unbleached, thick, and loosely made variety is the best. If buying it by the yard, 13 yards should be purchased to make into a dozen towels; this allows for the hems.

Very good ready-made towels are to be had either with fringed or hemstitched ends, from 9d. to 1/1 each. Much more expensive ones may be bought; but the above is a medium price.

Small bath-towels cost from 1/3: large bath-sheets of white Turkish towelling, with fringed ends, from 2/4.

KITCHEN TOWELS. A good supply of tea, glass, and basin cloths is also necessary. These should be carefully marked and hemmed, and should be of a distinctive pattern, so that each may be used solely for its legitimate purpose. These, with dusters, should be given out weekly, the soiled ones being counted after washing, before being replaced in the linen cupboard.

Hessian hearth-cloths, oven-cloths, and knife-cloths should be hemmed, marked, and entered in the linen-book.

Unbleached calico, cut in suitable-sized pieces and hemmed, answers very satisfactorily for pudding cloths.

Coarse linen is the most appropriate material for drying paint after washing.

MARKING. Kitchen towels and cloths should be marked as carefully and methodically as bed and table linen. Where the marking is in ink it is usually placed in the top left-hand corner, as this shows conveniently when folded after ironing.

Thread marking has one disadvantage—in that, besides taking much time, it can easily be picked out by dishonest people. In large institutions, articles are often marked in the actual centre, because if near a hem the mark can easily be torn off and the article rehemmed.

Where sheets are set apart for each special room the marking would be as follows:—

	Guest.	
2.	Smithson.	3.
	1902.	

The word “guest” of course indicates that they are reserved for the spare room, 2 the number of the pair in question, and 3 that there are three pairs in the set reserved for the spare room.

By this method it is easy to see the sets are complete, and if one be missing to ascertain which it is. Sheets should be put away in pairs in the linen cupboard, one being rolled inside the other.

Where separate table-cloths are used for breakfast, luncheon, and dinner, they should be marked in the same way, putting the name of the meal for which they are intended—thus :

	Luncheon.	
4-	Smithson.	6.
	1902.	

which shows that there are six luncheon-cloths in the set, and that this particular cloth is No. 4. Carving-cloths, tray and supper cloths, and small d'oylies are often marked in the centre, where, when in use, the marking will be hidden.

Small scent-sachets or lavender-bags placed in the cupboard cause a delightful fragrance to cling to the linen, especially in the case of sheets. Old table-cloths should be cut down to make breakfast, supper, tray cloths, or serviettes.

QUANTITIES. This is a moot question, as it depends entirely on the purse, size of the household, and amount of accommodation. The following list may be a guide in the case of a small household :—

- 3 Pairs sheets for each bed or 5 pairs for 2 beds of same size.
- 3 Pillow-slips for each single bed.
- 6 " " " " double bed.
- 3 Bolster-covers for each bed.
- 2 Under blankets " "
- 2 Pairs top " " "
- 2 Counterpanes for each bed, or 3 for 2 beds of same size.
- 3 Toilet-covers for each dressing-table or chest.
- 3 Slips and mats for each dressing-chest.
- 3 Roller towels for each roller.
- 3 Bath-towels for each person.
- 6 Bedroom-towels for each person.
- 3 Kitchen table-cloths.
- 6 Tray-cloths.
- 4 Afternoon tea-cloths.
- 3 Sideboard-cloths.
- 3 Dinner waggon-slips.

- 3 Dinner table-cloths.
- 3 Breakfast table-cloths.
- 2 Large table-cloths for special occasions.
- 1 Dozen breakfast serviettes.
- 2 or 3 Dozen dinner serviettes.
- 3 Carving-cloths.
- 3 Supper-cloths.
- 1½ Dozen glass-cloths.
- 2 Dozen tea-towels.
- 1 Dozen basin-cloths.
- 6 Chamber-cloths.
- 6 Lavatory-cloths.
- 6 Paint-cloths.
- 4 Oven-cloths.
- 3 Hearth-cloths.
- 6 Knife-cloths.
- 6 Grate-dusters.
- 1 Dozen ordinary dusters.
- 2 Dozen furniture dusters.
- 6 or 8 Dust-sheets.
- 6 Curtain-bags.
- 1 Dozen dish-cloths.
- 6 Yards floor-flannel.

For the maids the bedding and towels may be allowed in the same proportion, only of a stronger make.

CHAPTER IV

Arrangement of Work

Division of Work for one or more Servants—Servants, and ways of procuring them—Characters—Wages—Notice—Duties of a Housemaid, Cook-general, Butler, Footman, Scullery and Kitchen-maid.

THE servant question seems to be one of the most discussed, many people holding that domestics are in every way deteriorating, and that it is almost impossible to secure a thoroughly good one. Surely this is a very sweeping assertion, though no doubt many lazy, careless girls do offer themselves; but, on the other hand, there are many who do their work conscientiously. Doubtless there is some truth in the saying that "a good mistress makes a good maid," and certainly many respond to kindly judicious training.

INQUIRIES. There are various ways of securing maids. Some people inquire amongst their friends or amongst the tradesmen with whom they deal; this, although wise, is not always practicable, as it requires so much time. Other persons affect Registry Offices. This is satisfactory when the head of the office is conscientious, and has a good reputation to keep up; but in many towns these offices are most disappointing, as, after paying a fee, names and addresses are given to the mistress, who finds the women already engaged. Perhaps the best plan is to advertise briefly in a good newspaper, stating the requirements and the wages. The applicants should be granted a personal interview, in which the duties, wages, times of going out, and general arrangements of the house should be clearly stated. This also gives the maid an opportunity of seeing the house, the kitchen, and her own room, and affords her a better idea of the amount of work she will be called upon

to do. During this interview it is well to ascertain, (1) the reason for leaving the last situation ; (2) the wages previously received and what is now asked ; (3) whether the maid really possesses knowledge of the work she undertakes to do ; (4) details of her home and people.

Should this interview prove satisfactory, the former mistress, if possible, should be seen, as a conversation always proves more of a safeguard than a written communication. The main questions to be put are, (1) the reason for her leaving last situation ; (2) as to her moral character, cleanliness, neatness, capacity for work, temper, health, and early rising.

WAGES. These should be paid monthly, dating from the day she enters the situation, payment being made on the corresponding date each month. It is well to have a wage-book, entering each payment and seeing that it be duly signed. A mistress cannot claim compensation for breakages unless such an arrangement is made beforehand. A doctor is not one of the liabilities when a servant is ill, nor is personal nursing, although most people would, out of humanity, do all in their power to hasten recovery. Should the mistress send for a doctor she is responsible for the fee. The Insurance Act now deals effectually with this question. An inducement to do well, and to remain in the situation, is to promise an increase of wage at the end of each year, with a larger increase at the end of five years.

DISMISSAL OR LEAVING. A month's notice on either side is usual. If a maid is dismissed without notice, owing to some alteration in the plans of her mistress, a month's wages should be paid to her in lieu of notice. If she leaves suddenly, of her own accord, without giving notice, she forfeits a month's wages.

If a maid be dismissed at a moment's notice on account of some very serious misdemeanour, such as drunkenness, dishonesty, or immorality, she is only paid up to the day of dismissal. A servant has no legal right to a character ; it depends on the courtesy of the mistress. Whilst a thoroughly bad character, given to a servant, trenches on libel, and may be proceeded against as such, there are many instances in which it would be impossible to truthfully give a good one. In such a case a mistress may decline to give one ; but it must

be remembered that this refusal will be taken to indicate some very grave offence. For mere forgetfulness, untidiness or unpunctuality, such an extreme measure should not be taken.

BOARD WAGES. When the house is left in the care of the servants, or where they are sent away temporarily for the convenience of their mistress, it is customary to allow board wages, varying from 5/6 to 10/- weekly, exclusive of fire and lights.

NEW SERVANTS. Before the arrival of a new maid it is well to draw up an inventory of the things that will be under her care; also to prepare a written scheme of work, and mention the time for going out.

GOING OUT. Usually one night a week and the alternate Sunday afternoon and evening are given; in some places one day a month is also given. The yearly holiday naturally depends on varying circumstances, but it usually extends from a week to a fortnight.

Most women-servants are allowed 1/- weekly for laundry expenses, it being supposed that they will get up their own smaller things, such as collars, cuffs, caps, etc. For nurse-maids 2/- to 2/6, and for men-servants 1/6 per week is usual.

LICENSE. An annual license costing 15/- must be taken out at any post-office for each man-servant and "buttons"; this must be renewed every January.

ALLOWANCES. Where there are many servants it is usual to allow weekly $\frac{1}{4}$ lb. tea, 1 lb. sugar, and $\frac{1}{2}$ lb. butter. Some people even apportion cheese and bacon.

ADDITIONAL HELP. This is often a source of friction owing to gossip which takes place between the charwoman and the resident maids. The charge in most towns is 2/6 daily, if the woman brings her own food; and either 1/6 or 2/- if provided at the mistress' expense. The hours usually are from 8 a.m. to 7 p.m.

A "between maid" often helps the nurse with her morning cleaning, and helps the cook later in the day, or, where there are no children, she may help the housemaid in the morning.

It should be impressed on all maids, but especially on cooks, that no "perquisites" are allowed.

USUAL WAGES IN LARGE TOWNS :—

Cook or Cook Housekeeper,	£20 to £40.
Plain Cook,	£16 to £23.
Kitchen Maid,	£10 to £16.
Scullery Maid,	£8 to £14.
General,	£9 to £24.
Housemaid,	£13 to £20.
Head Housemaid,	£20 to £25.
Parlourmaid,	£17 to £25.
Lady's Maid,	£23 to £30.
Nursemaid,	£10 to £20.
Lady Head Nurse,	£25 to £40.
Butler,	£40 to £100, with board.
Footman,	£20 to £60, with livery.

ARRANGEMENT OF WORK. In order that the domestic arrangements may run smoothly, and nothing be omitted, the mistress should carefully plan the work and write out a scheme, so that the maids may know exactly what is expected of them and lose no time in wondering what to do next. Each maid should have a table of her respective duties.

Obviously every mistress should make her own arrangements, so that they fit in with the circumstances of her household ; but the following tables may be of use to those unaccustomed to drawing up programmes.

GENERAL SERVANT.—House of seven rooms.

- 6 a.m.—Rise, light kitchen fire, fill kettle, clean boots, sweep hall, clean steps and brasses, light breakfast- or dining-room fire, sweep and dust the room.
- 8 a.m.—Prepare and lay cloth for breakfast, have kitchen breakfast while dining-room breakfast is going on, open bedroom windows, strip beds, and attend to wash-stands.
- 9 a.m.—Remove and wash breakfast-things.
- 9.20 a.m.—Help mistress to make beds, dust bedrooms and stairs, receive orders for the day.
- 10 to 12 a.m. Special allotted work. The mistress during these hours is probably doing the cooking.

- 12 to 1 p.m.—Help mistress in kitchen, lay cloth for dinner.
 1 p.m.—Dining-room and kitchen dinner.
 1.30 p.m.—Remove and wash dinner-things, knives and sauce-pans, make up sitting-room fire, tidy kitchen.
 2.30 p.m.—Dress, and do some light work, such as cleaning silver ; being in readiness to answer the front-door bell.
 4.30 p.m.—Prepare tea for room and kitchen.
 5.15 p.m.—Remove and wash tea-things.
 5.45 p.m.—Turn down beds, draw bedroom blinds, light gas.
 8 p.m.—Prepare supper.
 9 p.m.—Remove and wash supper-things.
 9.45 p.m.—Take hot water to rooms, and go to bed.

DAILY SPECIAL WORK

MONDAY MORNING.—Wash flannels, towels, dusters, and handkerchiefs. If all the washing is done at home, the mistress will probably work herself, so that the maid may have a long uninterrupted morning for washing.

TUESDAY MORNING.—Turn out one large bedroom.

AFTERNOON.—Ironing.

WEDNESDAY.—Turn out two or three smaller bedrooms.

THURSDAY MORNING.—Turn out dining-room, bathroom, and staircase.

AFTERNOON.—Clean silver.

FRIDAY MORNING.—Turn out the drawing-room, clean the hall.

AFTERNOON.—Clean kitchen coppers, brasses, and tins.

SATURDAY.—Clean range, kitchen, storeroom, larder, and area.

Where the household is large and only one maid kept, the mistress or elder daughters should certainly take an active part in the work of the home.

HOUSEMAID (2 Maids)

6 a.m.—Rise, sweep and dust drawing-room, light fire if necessary, call family, take up hot water, lay the cloth for kitchen and room breakfast, strip beds, attend to wash-stands whilst family are at their meal, remove breakfast things, dust bedrooms, bathroom, stairs, etc.

10 to 12.30 p.m.—Special work. Dress and lay cloth for

luncheon or dinner, and wait at table if required.
Remove things, wash silver and glass.

4 p.m.—Carry in afternoon tea.

6 or later.—Lay cloth and wait at late dinner, lighting gas, drawing down blinds when necessary. Turn down beds, etc.

WEEKLY WORK

MONDAY.—Collect the things for the laundry; give drawing-room a little special attention.

TUESDAY.—Clean bedrooms.

WEDNESDAY.—Clean bedrooms.

THURSDAY.—Clean library or morning-room.

FRIDAY.—Clean bathroom, lavatory, stairs, etc.

SATURDAY.—Clean the drawing-room, air and put away linen. In the afternoons such light work as cleaning silver may be done, also household mending. Answer all inside house-bells during the day, and the front door after 1 o'clock.

When no boy is kept the housemaid cleans the children's boots.

COOK-GENERAL (2 Maids)

6 a.m.—Rise, light kitchen fire, fill kettle, sweep hall, clean steps and brass of front door. Light fire, sweep, and dust dining-room, prepare breakfast for room and kitchen, wash up the breakfast things, tidy the kitchen, meet mistress to receive orders for the day (first helping the housemaid to make the beds), cook and serve the middle-day meal, wash up the things, crockery, tidy kitchen, and dress if no late dinner, prepare tea, prepare late dinner if ordered, make coffee, wash dinner-things, and prepare fuel for the next day.

SPECIAL WEEKLY WORK

MONDAY.—Wash kitchen cloths, dusters, etc.

TUESDAY.—Clean the dining-room.

WEDNESDAY.—Clean larder and storeroom.

THURSDAY.—Clean all kitchen utensils, and turn out cupboards and drawers.

FRIDAY.—Clean flues, blacklead kitchen grate, and clean the entrance hall.

SATURDAY.—Clean kitchen and scullery.

Where two maids are kept, it is well when advertising to use the name cook-general rather than cook, as a cook may refuse to assist in the general work of the household.

The cook-general undertakes the cooking, care of dining-room, hall, front door, steps, and brasses, and maids' bedroom in addition to the kitchen, larder, and offices; she keeps the coal-scuttles full, does the washing up of all except silver and glass, cleans the boots of the master and mistress, answers the back door all day and the front door up to midday.

The housemaid is responsible for the sitting-rooms (except the dining-room), dressing-, bed-, and bathrooms, lavatories, staircase, and her own pantry. She takes charge of silver, glass, and tea-things, lays the table for all meals, waits at table, answers all the indoor bells and the front door after midday.

THE BUTLER. In houses where a butler is one of the staff of servants he is always considered to hold the most important position. His responsibility is considerable, as the silver and wines are in his care, and it is he who sees to the barring of windows and doors at night-time. The billiard-room and library fall to his care; he attends to the front door and drawing-room bells, announcing visitors, receiving messages and taking charge of letters, cards, etc. His work in many respects corresponds to that of a parlour-maid.

FOOTMAN. In houses where only one is kept he is responsible for calling the gentlemen of the household in the morning, for laying and clearing away breakfast, for washing up china, silver, and glass. He also attends to boots, knives, windows, lamps, fires, bells, and coal-scuttles, and is usually expected to brush the clothes of the gentlemen unless a valet is in attendance.

SCULLERY-MAID. This domestic is fully employed in cleaning the various utensils used by the cook and kitchen-maid, and in the preparation of the various vegetables required by them for their culinary work.

KITCHEN-MAID. Where a scullery-maid is kept, the

kitchen-maid prepares various ingredients for the cook's use, and helps her with the plainer dishes. For a girl who aspires to become a cook this is an excellent opening, as she has many opportunities of learning.

Where there is no scullery-maid the kitchen-maid cleans and lights the range, and is responsible for the cleanliness of kitchen, passages, dishes, etc., in addition to waiting on the cook.

CHAPTER V

Household Expenditure

Advantage of keeping Accounts—Ready Money—Discount—Tradesmen's Books—Account Sheet—Expenses—Division of Expenditure—Precautions in paying and receiving Payment by Cheque—Receipts—Distinction between True and False Economy—Examples.

By accurate account-keeping it is easy to ascertain how the current expenses compare with the income. This includes the price of all purchases, what money has already been spent, how much there is in hand, whether there has been undue extravagance in any one branch, and where retrenchment may most effectually be made. Regular daily entries are essential to ensure accuracy. Many people commence a new book at the beginning of the year, and for a few days enter every payment most diligently, but soon defer the entries for a day or two. Then the exact details are forgotten, and either many things are entered as "sundries," or a trifle is added here and there to make the totals balance. It is needless to say such accounts are worthless.

In order that a housekeeper may plan her expenditure wisely, she should have a regular allowance paid weekly, monthly, or quarterly. The amount is sometimes proportioned to the number of individuals forming the household. For middle-class catering probably this sum varies from 8/6 to 10/6 per head per week. The rent is usually calculated to take up one-eighth of the total income, and the taxes to amount to one-third of the rent. A certain proportion should always be set aside for emergencies and unforeseen contingencies: fire insurance should be paid, also life insurance, and something

should be saved, it being a most thriftless plan to live quite up to the yearly income.

The tradesmen's accounts should be paid weekly, and the small vouchers or weigh bills accompanying all goods should be kept to check the books by. Milk and bread should be entered daily in their respective books. This is called ready money, though not paid at the exact moment of purchase. Ready money paid for everything ensures the best articles at the lowest price, produces willingness to oblige on the part of the shopkeeper, and secures discount, which often is allowed on immediate payment to the amount of 5% or 1/- in the £1. Dr. Smiles said, "A man knows his actual position if he pays his way as he goes. He can keep within his means and so apportion his expenditure as to reserve a fund of savings against a time of need. He is always balanced up, and if he buys nothing but what he pays for in cash, he cannot fail to be on the credit side of his household accounts at the year's end." Emerson says, "To pay ready money is a great check on the imagination."

Where long-standing bills are in vogue small errors may easily pass unnoticed, which would have been discovered if ready money had been paid.

Every purchase should be carefully considered: much money may be frittered away on tempting trifles which have no real value.

The plan on p. 34 is a clear method of entering and balancing the household accounts.

This shows that on the quarter's expenditure a balance or saving of £3 4s. was effected on the allowance.

Accounts should be checked every quarter, when the cross cast of the quarterly and the cast of the weekly totals should agree.

A petty cash book should also be kept, in which details of repairs, renewals, and sundries can be entered, as it is not practicable to rule off spaces for everything in a household account book.

THE CURRENT EXPENSES of a household are always the most serious; under this head come rent, taxes, food, wages, coal, gas, education, and everything that has to do with the cleaning and keeping up of a home.

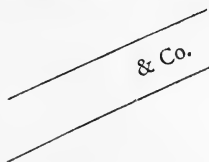
CONTINGENT expenses, which are out of the ordinary routine, and which cannot often be foreseen (such as a sudden illness or accident), call for an immediate supply of ready money.

OCCASIONAL expenses are those which are also out of the ordinary routine of expenditure, but which can be calculated upon, and the amount regulated ; such as a yearly holiday, entertaining friends, the purchase of additional furniture, etc. Where the income is fixed, many housewives find the plan of dividing it into eighths a great help in their calculations, and allotting it as follows : one-eighth rent, four-eighths food and household expenses, one-eighth clothing, one-eighth incidental or contingent expenses, such as doctor, books, insurance ; and one-eighth should be saved and carefully invested.

PRECAUTIONS TO BE OBSERVED IN PAYING BY CHEQUE

1. Fill in the details carefully on the counterfoil.
2. Spell the payee's name correctly, and use the right initials.
3. Write "the sum payable" distinctly, starting from the extreme left-hand side of cheque, and leave no space between the written number and the word "pounds," so preventing the forged addition of "ty," turning six into sixty or seven into seventy.
4. The signature of the drawer on the cheque must agree with the signature in the banker's book when the account was opened.
5. Always fill in cheques in ink.
6. Guard against roguery by either a general or a special crossing.
7. As a still further safeguard, an amount a trifle higher may be written across the face of a cheque thus, "Under Ten Pounds," protects against the substitution of nine into ninety ; or the words "not negotiable" may be used. Some large firms also perforate the amount on the cheque.
8. If any alteration has to be made in the amount, write your own initials as drawer.
9. Ascertain that there are sufficient funds at the bank to pay it, otherwise the cheque may be dishonoured.

10. Be careful that the amount agrees in words and in figures, otherwise the cheque will be returned by the bankers with the words "amounts differ."



11. When a cheque is crossed thus it can only be paid through a bank.

A special crossing is similar, only the name of the payee's banker must be inserted between the lines, in which case the drawer's banker will pay through the bank mentioned only.

PRECAUTIONS IN RECEIVING PAYMENT BY CHEQUE

1. Payment by cheque should not be accepted unless the drawer is a person of sound financial reputation.

2. If the drawer has misspelt the payee's name, the payee should first endorse it as misspelt, and then write the correct signature underneath.

3. Cheques should be presented for payment as soon as possible, as delay may mean that the drawer's fund is exhausted. Possibly, also, death may intervene, and great delay in payment will ensue.

4. If a cheque is held back for six months, the banker will not cash it until he has referred it to the drawer and obtained his consent. Cheques are subject to the Statute of Limitations, and after six years' retention payment cannot be enforced.

5. If by any chance a cheque should be lost after it is endorsed, advise the drawer and request him to communicate with the banker, thus stopping payment.

6. If the cheque is in payment of a debt of £2 or over, a receipt should be stamped, defacing the stamp by writing the signature over it, as a cheque is not usually a receipt.

7. A cheque may be payable to "Bearer"—that is, any person who presents it—or to "Order." In the latter case it must be endorsed by the person to whom the cheque is made payable; that is, he must write his name on the back of it. As "Bearer" cheques require no endorsement, in matters of

business "Order" cheques are preferable. In cheques altered from "Order" to "Bearer," the alteration must be initialled by the drawer.

8. Cheques dated on a Sunday are not payable till Monday, and cannot be cashed on the preceding Saturday.

9. "Mr.," "Mrs.," or "Miss" should not appear on an endorsement.

RECEIPTS. All receipted bills should be kept for seven years; according to the Statute of Limitations, no payment can be insisted on after six years from the date of purchase; the additional year is simply a safeguard against any mistake.

Receipts should be made out very clearly, so as to admit of no mistake; they should be dated in full, and the amount written in words and in figures. If £2 or over, the receipt should be stamped, and the receiver's name written by himself on the stamp. For additional security it is well to write for what debt or purpose the money was paid—thus:

March 7, 1906.

Received from JOHN HASTINGS the sum
of FIVE POUNDS, being a Month's Salary
from February 7 to March 7, 1906.

£5 0 0.



If the bill has been paid by cheque it should be so stated on the receipt.

DISTINCTION BETWEEN TRUE AND FALSE ECONOMY

The vast difference between true and false economy is not always recognized. It is more than ever, in these days of keeping up appearances, incumbent on the housewife to realize that her prudence and forethought are in themselves sources of income. Her work is to get the best possible value in every

way: (1) the best possible return for all money spent; (2) the greatest amount of comfort and cleanliness with the least expenditure of labour and cleaning materials; (3) the longest use out of materials by properly and economically cutting the garments to be made; (4) the greatest amount of health for herself and her household by observance of the laws of hygiene. The duty of the housewife is also to spend as well as to save. Here a mistake is often made, some people considering economy to be the art of going without. Mere parsimony is not economy, and the woman who is niggardly is not always economical.

WARMTH, LIGHT, AND CLOTHING. True economy provides a sufficiency of fire, clothing and light, as stinting in either of these items will either lead to disproportionate expenditure in other directions, or in doctor's and optician's bills.

REPAIRS. True economy keeps everything in the house in a state of careful repair; false economy saves this small outlay, but ultimately is put to the greater expense of either buying new goods or paying for more costly and extensive repairs.

TABLE AND HOUSE LINEN. True economy keeps the stock of house and table linen replenished; false economy saves this expense; but when all is fallen into a condition of extreme shabbiness it is put to the excessive outlay of buying at once a whole new stock instead of gradually replacing things as they wear out.

TOOLS. True economy provides proper tools and appliances for household work, whereas through false economy time, patience, and temper are lost in attempting to manage without, the result also being unsuccessful.

MATERIALS. True economy buys only good materials, whether in clothing or food; false economy buys cheap things which either quickly wear out, or in the case of food are not nourishing; the results being that the members of the household have a shabby, tawdry, ill-fed appearance.

SALES. False economy buys things at sales merely because they are cheap, without being in real need of them. In this way much money is frittered away, and things so bought rarely prove useful.

SAVINGS. True economy saves money and invests it in some safe way as a provision for a rainy day. False economy spends all in its possession without attaining to any comfort, as what it saves by parsimony in one direction it is compelled to spend in another, being "a penny wise and a pound foolish."

EXAMPLES OF TRUE ECONOMY

Much waste often takes place in peeling potatoes: they should be peeled as thinly as possible, the most nourishing part lying next to the skin. The parings should be dried and utilized as fuel for the kitchen fire. Apple-parings should be treated in the same way.

Cold potatoes may be used for potato-cakes, or when fried, with cold fish or meat, and may be transposed into many appetizing dishes.

Fat can always be clarified and made into good dripping, bones being used for stock.

TEA-LEAVES. Tea-leaves should be utilized for cleaning glass bottles and sweeping carpets.

Much waste takes place when a housekeeper has little idea how much to order, an overplus leading to extravagance. Careful calculation should be made before ordering. Allowing things to become sour is a great source of waste. In hot weather milk should be boiled; also stock and soup. Raw meat is more apt to become bad than cooked meat, and some meats are more prone to it than others, *e.g.* a shoulder will become bad more quickly than a leg of mutton; and lamb more quickly than mutton. In large households an ice chest is a great economy.

FAT. Another common form of waste is in the use of fat for frying. In dry frying more is often used than is necessary, much being wasted by spluttering over the stove, and the remainder is usually thrown away. French or wet frying is much more economical, as the fat, properly strained, can be used for months.

BREAD. Loaves should be cut evenly, and only sufficient for the meal, as pieces quickly become stale. The crusts should be eaten, and one loaf be finished before another is commenced. Should an overplus be cut up, it may be utilized for

college and bread-and-butter puddings ; smaller pieces may be transformed into browned crumbs or fried to make sippets for soup.

Eggshells should be kept for cleaning enamel saucepans and the rims of pie dishes.

New utensils, cloths, or brushes should not be given out unless the housewife has seen that the old ones are really worn out.

WHITE PAPER should be folded carefully and kept for weighing or other kitchen purposes.

BROWN PAPER should also be folded and put aside until required.

TISSUE PAPER is most useful for rubbing up mirrors and picture glasses.

NEWSPAPERS are, of course, invaluable for lighting fires and covering scullery shelves. Old newspapers may be sold for about 2/6 to 3/- per hundredweight.

STRING on parcels should not be cut, but untied and wound up evenly, being placed in a bag or box for future use.

EMPTY BISCUIT TINS are usually willingly taken back by the grocer, who will allow 3d. on each large one.

EMPTY WINE BOTTLES, jam jars, etc., are usually received back by the tradesmen, a small amount being allowed for them.

TOWELS. Two old thin towels stitched together form a good one.

Old stocking-feet may be used as floor flannels.

Old merino vests and undergarments are most useful for washing paint.

Worn sheets, old blankets, and old table-cloths may be utilized as suggested in other chapters, and economy in fuel has also been spoken of.

Experience will teach the housewife many ways in which she can exercise the true economy which not only does not interfere with, but actually promotes, real comfort.

CHAPTER VI

Care of Sinks and Drains

Scullery Sink: its Position, Cleaning, and Daily Treatment—Daily and Weekly Care of Water-closet Pans—How to test Drains—House Refuse—Ash-bins: their Contents—Bath Pipes—Test of Water—Test of Filters—How to make a Filter—Frost—Hot-water Supply.

SO many works have been written on the subject of Domestic Economy—which includes a full explanation of drainage and the points to be borne in mind in connection with it—that it is unnecessary to do more here than speak of the care and cleansing of sinks and drains.

SCULLERY SINK

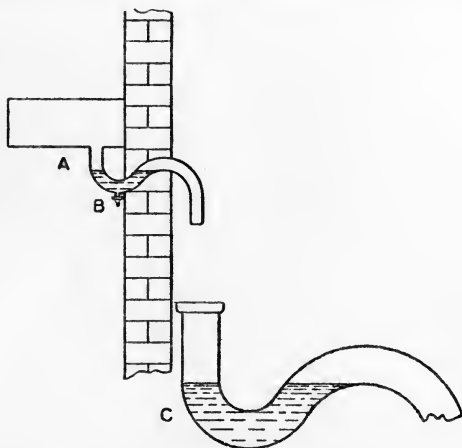
POSITION. This should be placed against the outside wall of a scullery. The waste-pipe leading from it should be taken through the wall, and should open into the air about 12 inches above the gully trap which leads into the drain.

After dirty water has been thrown down a sink, a little clean cold water should be allowed to run down after, so that both traps may contain clean, not impure liquid.

REFUSE PIECES. Refuse pieces should not be allowed to collect on a sink, but should be placed in a sink basket (enamel ones cost 1/-) and then burnt. A few coffee grounds will help to cleanse the pipe, but the bulk of the coffee dregs should be burnt. Tea-leaves must not be allowed to go down, as they would block the pipe. All water in which green vegetables have been cooked, and very dirty cleaning water, must be thrown down the outside trap.

CLEANSING PIPES. Daily a can of hot soda-water should

be thrown down the scullery sink. After it pour a can of boiling water to melt the soap which will form on the inside of the pipe, being composed of the soda and grease. If the pipe should become obstructed, unscrew B (in diagram), use a pliable cane, and pour down strong caustic soda-water.



A shows the U-shaped bend in which there should always be a supply of clean water to cut off any smell.

B is a little screw-tap placed in the centre of the bend to admit of the pipe being cleared from any obstruction with a pliable stick or cane.

C shows the water resting in the gully-trap, making assurance doubly sure by again cutting off any smell which might arise from the drain.

TO CLEAN A SINK. Daily wash the tiles and scrub the sink with hot soda-water, rinsing it thoroughly with hot, and then with cold water.

TO CLEAN A LEAD SINK. Purchase one pennyworth of pearlash, one pennyworth of soft soap, and one pennyworth of fuller's earth. Mix these ingredients thoroughly, gradually adding one quart of boiling water. Keep in an old tin or

basin, daily rub the sink with a flannel dipped in this mixture, rinsing thoroughly.

WEEKLY TREATMENT. Dissolve one ounce of permanganate of potash in three pints of boiling water. A little should be poured down every sink, both inside and outside the house, every water-closet, bath, and lavatory basin.

WATER-CLOSET PANS. These should be brushed daily with a sanitary bass brush ($1/3$ each), which should be hung on a nail outside the window; once a week strong soda-water should be used. If discoloured through neglect, use a little hydrochloric acid (spirit of salt); a fume will arise, but it is quite harmless. The door of a water-closet should always be kept shut and the window open. Care should be taken that burnt matches, faded flowers, and hair are never thrown down to obstruct the pipes.

TO TEST DRAINS. If through any unpleasant smell, frequent sore throats, boils, ill-health, or the presence of rats, the drains are suspected, they can be easily tested.

PEPPERMINT TEST. Mix one ounce of oil of peppermint with three gallons of hot water, and pour it down the outside water-closet, or the top of the soil-pipe, after closing all doors and windows. If there is a leak or defect anywhere, the smell will be apparent, in which case the matter should be attended to immediately, as delay may prove fatal.

HOUSE REFUSE. In most large towns this is removed thrice weekly by the scavengers. In the mean time, it should be kept in some convenient receptacle.

ASH-BINS. The best for the purpose are two-handled, round, galvanized iron bins, which can easily be moved, and which have no corners in which germs may lurk. A lid is essential to prevent the entrance of damp, which quickly causes an unpleasant smell, and also to prevent the dust from blowing about. A convenient-sized, well-made one costs about 9/6 or 10/-; those with wheels are easily moved.

It should be placed several feet away from the house, and as far as possible from any windows. Animal and vegetable refuse should all be burnt; the only contents of the ash-bin should be the sifted ashes, unredeemedly broken glass or crockery,

and old tins whose contents have been finished, care being taken that no liquid is thrown in.

BATH AND LAVATORY BASIN PIPES. Where the water is hard, the soap-curd is liable to accumulate and partially choke the pipe, causing the water to run away slowly. When this is the case, pour down a kettle of boiling soda-water, followed by boiling water. The handle of a toasting-fork is often useful in clearing away any obstruction. Water which has been used for scrubbing floors should not be thrown down a bath or any inside pipe, as the fluff from the flannel often causes a stoppage.

WATER. Pure water is colourless, or if seen in large quantities a deep blue: it should be free from odour, clear, and pleasant of taste.

A SIMPLE TEST. Fill a tall glass with water, adding a few drops of Condyl's Fluid: side by side with it fill another glass with distilled water, adding a similar amount of Condyl's Fluid. If the first becomes very quickly of a different colour to the second, then organic matter is present.

Distilling renders water purer than any other method; but aëration is then necessary to make it agreeable, which is rarely practicable except on large steamers.

Prolonged boiling ensures the wholesomeness of the water.

Filtering is not efficacious unless the filter is kept in good condition. New filters should be well washed to get rid of dust and impurities: to accomplish this, allow ten or twelve gallons of water to run through. Filters should be cleansed by periodically brushing the filtering material and allowing it to stand in the open air.

SIMPLE TEST OF THE EFFICACY OF A FILTER. Add one tablespoonful of Condyl's Fluid to one gallon of water and pour into the filter. If after standing a short time the water drawn off by the tap is pink, just as it went in, the filter is no good, unless the water is wonderfully pure. If, on the other hand, it comes out with a yellow tinge, then the filter is worse than useless, as it has actually imparted impurities to the water; but if the water comes out limpid, tasteless, and colourless, then the filter is answering its purpose.

HOW TO MANUFACTURE A FILTER. Soak a clean

flowerpot for some hours, then plug up the hole in the bottom with a piece of sponge; cover this with a layer of small pebbles; half fill the pot with alternate layers of sand, charcoal, and gravel. Tie a piece of fine white muslin round the top of the pot; pour the water on this, allowing it to run through the flowerpot into a pan beneath. The sponge must frequently be thoroughly cleaned.

ODOUR. This can sometimes be detected only by heating. A small quantity should be put in a flask and heated to 80° F., and as the smell is usually evanescent, the water should be smelt as soon as the stopper is removed.

The following list gives the diseases which are usually considered to be caused, or partly caused, by impure water: typhoid, cholera, diarrhœa, dysentery, diphtheria, dyspepsia, parasitic diseases, metallic poisoning, and, in tropical countries, malarial fever.

The connection between goitre and cretinism and impure water, in mountainous districts, is often recognized.

SEVERE FROST. If the house is to be left unoccupied for a short time during frosty weather, it is a wise precaution to cut-off the water supply at the main and then turn-on every tap in the house, thus allowing each pipe to empty itself. Where the house is inhabited, allowing each tap to be turned on so that the water just trickles from it, or keeping gas-jets lighted in the neighbourhood of the various pipes, is usually sufficient to keep the contents from freezing and bursting. A lamp or oil-stove may be kept burning in the tank-room, and a handful of salt thrown into the cistern to retard freezing. When the supply pipes are in a cold, draughty cellar, or exposed to the weather, they should be wrapped round with straw, old rags, or felt, draught being almost as dangerous as extreme cold in frosty weather.

HOT-WATER SUPPLY. No wise housekeeper should take or build a house that has not a self-filling arrangement, because if neglected, and the supply of water gets too low, the iron becomes overheated and explodes. There are many forms of the circulatory system, but all are based on the same principle. Water expands on being heated, and will rise to the highest place in the receptacle containing it, displacing the cold water

already there, and forcing it to descend until the whole supply attains an average heat.

At the side or back of the range is a cast-iron boiler, usually what is called, (1) the boot or shoe, (2) the saddle pattern. This varies in size, according to the requirements of the house, from five to thirty gallons. There is a damper in the boiler flue, by which the heat may be controlled. A most serious fault is to allow water to be drawn off direct from the boiler in the kitchen, as the water will sink, and the boiler may crack. The tap in the kitchen is only to be used when the fire is out, and it is necessary to draw off the water in order to repair the boiler.

Where the water is hard, iron pipes are liable to the formation of a deposit which will corrode them to such an extent that they become leaky and crack. Copper pipes are secure against this danger. Should the boiler become thus corroded it may be treated in the following manner: Prise up the lid, and with a chisel remove all the incrustation, after emptying out the water; scrub thoroughly with strong soda water, and rinse carefully. Replace the lid, sealing it with asbestos to render it fireproof and watertight.

CHAPTER VII

Household Pests

Prevention and Extermination—Mice and Rats—Black Beetles, Cockroaches, Flies, Fleas—Fly Papers, Traps—Fumigating—Moths, Red Ants, Gnats, and Mosquitoes—Boxroom.

MICE AND RATS. However clean and well kept a house may be there is always the chance, especially in large towns or in old houses, of the appearance of these unwished-for visitants. Mice usually announce themselves by a scurrying behind the wainscot and by forming holes in the skirting-boards and walls : there is, moreover, a peculiar smell which cannot be mistaken. Large holes and vigorous thumping and squeaking in the wainscot are often the signs of rats. The appearance of these is nearly always a symptom of unsanitary drainage ; a matter that should be attended to immediately.

It is unwise to inject ordinary poison into the holes, as, if the mice or rats die in them, the smell is most unhealthy and unpleasant. Rags saturated with pure carbolic acid should be pushed into the spaces, which not only kills the vermin, but the acid consumes the flesh, and prevents the odour of decomposition. The presence of a cat in the house is a sure preventative of mice.

BLACK BEETLES. These are usually discovered first in the kitchens ; but if speedy measures are not taken they multiply so rapidly that they quickly introduce themselves into other parts of the house, travelling along the line of the hot-water pipes. If they are seen emerging from any crevice near the kitchen range, the mortar should at once be scraped away, as it probably contains the eggs of the insects.

The most effectual plan of dealing with this pest is to lift the kitchen hearthstone, kill all the beetles underneath, and cover

the space with a layer of boiling tar. Do not replace the stone till this becomes cooler, as the intense heat might cause it to crack.

Carefully watch for their reappearance, and on the first signs sprinkle the probable hiding-places with any good insect powder.

COCKROACHES. The safest way of getting rid of these insects is to scatter a few pieces of freshly cut cucumber-peel on the kitchen floor overnight. This is not a poison, but the delicacy is so tempting, and the cockroaches' self-restraint so small, that in the morning they will be found in a state of stupor, when they can easily be killed and their remains burnt.

ANOTHER METHOD. When cucumber is not available, mix 1 oz. of powdered plaster of Paris with double its bulk of oatmeal, and scatter it on the floor.

COCKROACH TRAPS. These are easily and effectually arranged as follows: Place a pie-dish on the floor containing a little beer or sugar and water; arrange a few sticks slanting up from the floor to the edge of the dish to make it easy of access. The cockroaches will crawl up and drown themselves.

It is quite possible nowadays, through frequent travelling in trains and public conveyances, for the most objectionable insect to be brought into the cleanest of houses. As they reproduce so quickly, immediate steps must be taken to get rid of them. Both iron and wooden bedsteads should be examined and attended to; iron ones being washed with strong soda water, wooden ones with carbolic soap. If, before being discovered, they have infested a room, the most stringent measures must be taken, such as stripping the paper off the walls, fumigating with sulphur, scrubbing the floor with carbolic, and sometimes even destroying the mattresses.

FUMIGATING. Place an oven-shelf or an old tray on a couple of bricks in the centre of the floor, close the window and chimney, hang a blanket or sheet over the window and door, or paste paper over all crevices, not forgetting the keyhole. Put some red-hot coals in an old pan and scatter on them about 1½ or 2 pounds of powdered sulphur; hurriedly close the door, and nail a blanket over the outside. Leave till the next day, opening the door for a little while before entering the room, so as to allow

the fumes of the sulphur to escape. It should be remembered that sulphur will take the colour from paint, paper, draperies, etc.

FLEAS are more usual in spring and summer than in winter ; a good sprinkling of Persian powder will keep them from infesting any bedding.

FLIES are very prevalent in the summer, but more especially in the autumn. Persian powder deals with them effectually ; so also do fly papers, which should be burnt after use.

FLY PAPERS. Spread treacle on thick, strong paper, scatter Persian insect powder over it, and place in prominent position.

FLY TRAPS. Cut a circular piece of card, rather larger than the top of a tumbler, make a hole half an inch in circumference in the centre, spread one side of the card, especially round the edges of the hole, with treacle. Partly fill a tumbler with soapsuds, put on the card cover with the sticky side downwards ; this will attract the flies, and they will fall in and be drowned.

Saucers containing formalin in the proportion of 1 teaspoonful to 1 quart of water may be placed in the room, as the inhalation of this proves fatal to flies.

MOTHS. These deposit their eggs on any thick woollen material, and when hatched the maggots eat through the warm, thick tissues. Saturating the part with strong liquid ammonia kills the insect ; but many colours cannot stand such strong measures.

Pyrethrum, or bitter apple powder, is a certain remedy ; so also is freshly ground, strong pepper. Camphor, Russia-leather parings, and cedar-wood shavings, are also good preventatives.

When cupboards are infested with moths the walls should be brushed with a strong decoction of tobacco.

If moths have got into any furs or other material, a prolonged baking in a slow heat is sometimes a cure ; but if the article be badly eaten it is better to sacrifice it rather than run the risk of the spreading of the plague.

TO DESTROY MOTHS IN CARPETS. Wring a cloth out of very hot water, place it on the infected part, and iron it with a very hot iron. Keating's powder is found to be very effectual.

The destructiveness of moths cannot be too highly empha-

sized ; warmth and damp are conducive to their increase. Linen rags saturated in turpentine, even when they have become dry, are very helpful in preventing their attacks.

RED ANTS. Oil of cloves or whole cloves scattered about in their haunts are said to be effectual in dispersing these tiny insects.

GNATS AND MOSQUITOES. Smearing the face and hands with oils of pennyroyal, geranium, or lemon keeps off these invaders. A bite should be touched with a little ammonia, or a weak lotion of soda and water, or any kind of spirit.

BOXROOM. In order that a house should be kept free from moths the boxroom should receive frequent attention. It should be light, ventilated, and dry, as darkness, stuffiness, and damp are all conducive to the existence of these small visitants. Rubbish should not be allowed to accumulate, corners should be turned out, and boxes and their contents overhauled regularly. There should be several strong shelves to support light portmanteaux, hat-boxes, bags and bonnet-boxes ; the heavier trunks are more easily accessible on the floor. Each box should have its strap and key attached to it. If the room is large, a cupboard for storing summer or winter clothes, and a chest for blankets, are great conveniences.

CHAPTER VIII

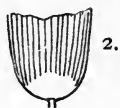
Lighting

Gas : its Advantages and Drawbacks—Varieties and Cleaning of Burners—Incandescent Light—Economies—Reading a Gas Meter—Chandeliers—Globes—Gas-poisoning—Acetylene Gas—Lamps : their Choice, Care, and Cleaning—Colza and Spirit Lamps—Electric Light—Candles.

GAS is the method of illuminating most in vogue ; it has many advantages, and some disadvantages, amongst which may be reckoned the following :—

ADVANTAGES AND DISADVANTAGES. (1) It is available for cookery, laundry work, and warming, in addition to lighting. (2) It saves time and trouble. (3) It is safer than lamps or candles, especially where there are children. On the other hand, there are several drawbacks. (1) It is certainly the most unhealthy form of light, as it dries and heats the air ; and one burner alone consumes as much oxygen as two adults. (2) The smallest escape will produce poisonous effects, and serious explosions may result from it. (3) The sulphurous vapour rapidly tarnishes silver, and injures plants, leather, and gilding.

VARIETIES OF BURNERS. There are three varieties of burners in common use. (1) The Argand (the most costly), which burns the gas from a ring of small holes, and which on an average equals thirty candles. (2) The Fish-tail, or Union, which is formed by two small holes bored in the top of a closed tube, inclining towards each other, producing a flame as shown. (3) The Batwing, which is formed by a long cut through a bulb on the end of a burner. This is durable and very easily cleaned,



but from the spreading of the flame it is not so suitable where globes are used as it is for kitchens and passages.

In all good burners steatite or pottery tops are used. In these there is a certain contrivance which retards the gas current; the illuminating power of one of these good burners is equal to about sixteen candles, the consumption being 4 or 5 cubic feet in one hour. It is important that burners should be of a suitable size for the purposes intended; a 5-foot burner is appropriate for a sitting-room, while for a passage or bathroom a 2-foot burner would be sufficient.

GOVERNORS. In many institutions economy in gas is secured by the use of a gas-governor, which acts as an automatic gas-tap, when fixed between the meter and the gas lights; closing and opening with every increase and decrease of pressure from the street mains. The cost varies from £1 15s. to £17, according to the size of the pipes to be controlled.

TO CLEAN BURNERS. For this purpose an old tooth-brush, or a corner of an old post-card should be used, not a wire, as this enlarges the holes and leads to the use of more gas. Grease may be removed by rubbing with paraffin, stale beer, or vinegar.

INCANDESCENT BURNERS are composed of 99 per cent. thoria and 1 per cent. ceria. The brightness is due to alternate oxidation and reduction of two parts carbon and three parts oxygen. The mantle fabric consists of "de-nitrated" collodion, which is steeped in mixed cerium and thorium nitrates in correct proportions. The mantle fabric is then woven into the familiar form, and on burning off the nitrates and collodion the ordinary mantle is left. After fixing a new one the taper should be applied to the narrow top of the mantle, the flame then travels evenly round till it reaches the base. The length of life of a mantle depends on the manner in which it is woven and the care it meets with; it usually lasts from 1000 to 3000 hours, and then gradually loses its lighting powers. This loss is due to the presence of dust, which clogs the pores of the mantle and causes bits of silica to fuse on the fabric. There is less danger of injuring a mantle where a by-pass is used: this costs 1/6 extra, or with lever and chains 2/6.

The most efficient form of incandescent light is that given

by the "Block" burner, one alone being equal to three hundred candles, and costing (according to the booklet issued by the Gas Company) one farthing per hour, using eight parts of air to one of gas. The mantle, which costs $1/3$, is made of more durable materials than the ordinary varieties, and is mounted on a brass cap with a double nickel wire support, which ensures its comparative longevity. The price of the burner is $5/6$.

The inverted incandescent burners, which shed the light downward, and thus do not affect the ceilings, cost $6/6$ each; the small inverted "Bijou" burners $4/6$ each. These may be fixed to an ordinary bracket, either singly or in clusters.

The "self-lighting" arrangement costs $9d.$ for each light to which it is attached. The pneumatic gas-lighting apparatus, costing $6/6$ for each burner, is a great convenience, since by its means the gas may be switched on from the doorway in exactly the same way as the electric light.

Economy may also be ensured by turning off the gas from the meter at a given hour each night and also by day if no stoves are used. This prevents leakage through small escapes; but it is most important to see that all taps are turned off first, or when the gas is again turned on and lights applied explosions may result, if not lighted at once.

The price of gas varies much in different localities, and at different times. The usual price in Cardiff is $2/10$ per 1,000; in 1901 it went up to $3/4$, owing to the raised price of coal; in 1902 it fell to $3/1$; in 1913 it is now $2/6$ per 1,000 cubic feet. At Hull, in 1901, it was $1/10$; 1902, $2/-$ per 1,000 feet.

HOW TO READ A GAS METER

Every housekeeper should know how to read a gas meter, and should from time to time check the quarterly gas bill.



CUBIC FEET.

When taking a house the gas company should be made ac-

quainted with the fact, and one of their men should read the meter to avoid all responsibility for gas consumed by previous tenants.

The diagram on p. 53 represents a small gas meter. In the case of a new meter all three hands point to 0, which position is called zero. As the occupants of the house commence the use of the gas, the hand on the dial to the right (marked hundreds) moves round to the right just as the hand of a clock progresses. Each figure it reaches speaks of the use of 100 feet of gas, and when it has travelled round the whole circle it indicates that 1000 feet have been consumed. By this time the pointer in the centre dial will have moved towards the left hand till it reaches 1, thus recording that 1000 feet have been burnt. When the pointer on the right-hand dial has moved right round once more, then the centre pointer will have moved to the left till it reaches 2, thus indicating that 2000 feet have been consumed, and so on. When the centre pointer has travelled right round its circle, the pointer of the left-hand dial will have reached 1 on the right hand, recording that 10,000 feet have been used. Thus each dial indicates how many revolutions have been made.

The diagram shows that 49,900 cubic feet of gas have been consumed. A little practice renders the reading of a meter quite easy.

CHANDELIERS. These have been in many rooms superseded by brackets, which distribute the light more equally ; but in dining-rooms, where the light is concentrated on the table, and in older houses, they are still to be met with. Those which have the weights attached are known as the "water-slide," and require that every two or three months about two table-spoonsful of water should be carefully put into the cup-like receptacle near the top, as this seals the gas and prevents its escape. A little glycerine added to this water retards evaporation. A bubbling noise indicates that a fresh supply of water is necessary ; but it should not be allowed to become so dry as to make its want known. It should always be refilled by daylight, because if a light were brought near the empty cup the unsealed gas would probably cause an explosion.

GILT AND BRONZE. It is well to wash gilt chandeliers occasionally with onion water, as this prevents flies from

marking it, the smell being objectionable to them. Bronze chandeliers may be cleaned by rubbing with a soft rag on which is a little vaseline.

GLOBES. The old-fashioned globes with only a 2-inch (in diameter) aperture at the bottom are still used ; but they cause considerable flicker of the flame, which involves loss of light, and is trying to the eyes ; they cost from $7\frac{1}{2}d.$ upwards. The best globes have at least 4-inch openings, which render the flame steady ; opal or milk glass gives the best light, costing from $1/9$ upwards ; coloured globes may be bought from 2/- upwards.

TO DETECT LEAKAGES. If the smell causes suspicion of a leakage, the simplest way of proving this is by turning off every burner and then examining the meter. The exact spot, in an exposed pipe, may be ascertained by painting it with a mixture of soap and water, using a camel-hair brush, when bubbles will be seen forming round the leak.

TO STOP A LEAK. Paint the pipe with oil paint containing red lead. If the leak is in an ill-fitting bracket joint, it may be stopped by applying freely a mixture of two parts beeswax to one of tallow, used warm.

JUMPING LIGHTS. Water in the pipes is frequently the cause of this, in which case a man from the gasworks should be asked to bring an apparatus to force or pump the water out.

GAS-POISONING

SYMPTOMS. Headache, giddiness, loss of memory and power of movement, profound insensibility, dilated pupils, laboured breathing, convulsions, and, if not discovered in time, coma followed by death.

TREATMENT. 1. Throw open doors and windows, carry patient into another room, turn off gas at meter.
2. Apply strong ammonia to the nostrils, rub the legs and feet with dry mustard, also the region of the heart.
3. Perform artificial respiration for some hours if necessary.
4. Inject a pint of hot coffee into the bowel.
5. Pour on to the head alternate douches of hot and cold water.

ACETYLENE GAS is made from calcium carbide by the

action of water on that compound ; the residue is slacked lime. Acetylene comes off as a gas, great heat being evolved in the process.

A special burner is used of the fish-tail type, a large quantity of air being necessary to completely burn the gas. It gives out more heat and light per cubic foot than coal-gas, and hence is more economical. The cost of lighting by acetylene is about the same as coal gas, using ordinary burners, but twice as much when incandescent burners are used. It is less poisonous, but more explosive. The cost of plant for making and storing for a ten-light meter is about £20. It requires so little space that it can be accommodated in an outhouse six feet square.

Air gas is another illuminant well adapted for country houses ; though it is now perhaps being superseded by petrol gas. It can be used for :

- (a) Lighting.
- (b) Enriching, *i.e.* increasing the heat and light-giving powers of coal-gas.
- (c) To some extent in photography, as it shows up colours almost as clearly as daylight.
- (d) Being easy to make, it is useful for heating and lighting remote schools and other buildings.
- (e) With special burners it can be used as a source of heat for Bunsen's and gas-stoves.

LAMPS. Nearly every winter we hear of some sad accident through the careless use of a lamp, or through the use of poor oil. Many people have a strong prejudice against this mode of lighting because of the smell ; but there is no danger of accidents when a few facts are rightly understood. Any smell is a reflection on the lamp trimmer, as a well-trimmed lamp should be odourless.

CHOICE. (a) The base should be firm and heavy, to avoid being easily knocked over.

(b) The reservoir should be of metal, china or glass easily succumbing to a blow, a fall, or a draught.

(c) Burners, which may be flat or circular, should be so made that a current of air may pass on both sides.

(d) The chimney should be fireproof.

(e) The oil must be good.

(f) The wick must fit well.

- (g) If possible, select a lamp which has a safety apparatus for extinguishing it.

OIL. Paraffin or petroleum oil is apt to explode when heated above its flashing point, which in the case of ordinary oils is about 73° Fahr. In order to be secure from accident, it is wise never to buy an oil whose flashing point is under 100° Fahr. ; this will cost 10d. or 11d. per gallon. If bought in large quantities it is, of course, cheaper, but there is always risk in case of fire. Large amounts should be kept well corked in an outhouse or cellar. A lamp will always burn better when the oil is moderately warm ; so that if the oil has been stored in a very cold place it is well to allow it to be in the kitchen a short time before filling the reservoirs.

WICK. The wick should be loosely plaited and should fit the burner. New wicks should be held to a candle for a minute to burn the top evenly, otherwise it is difficult to get them level. They give a better light and are less liable to smoke if, when new, they are steeped in vinegar, and dried before being placed in the burner.

CLEANING. The required materials are a piece of American cloth, one duster for the stand, one for the chimney and globe, a lamp mop, old pair of gloves, soft tissue-paper, oil-filler, oil, and a little bristle brush (1d.).

Lamps should always be attended to by daylight to avoid accidents. The materials used should be kept apart on account of the smell of the oil ; for this reason it is wise to spread a piece of American cloth on the table, and to wear gloves.

1. Remove and dust globe, washing it when necessary.
2. Dust and polish chimney, using a woollen chimney-mop ($1\frac{1}{2}$ d.) or a stick with a pad of chamois leather at the end.
3. Remove and dust the frame.
4. Dust and brush any charred bits off the deflector.
5. Rub the top surface of the wick with paper to remove the charred particles and leave it even, turning the wick up just above the level of the burner while attending to it, afterwards lowering it to prevent the oil from oozing out.
6. Fill the reservoir to within half an inch from the top, adding a lump of salt or carbon the size of a walnut, as this produces a better light.

7. Wipe the oil off the burner with paper until quite free from grease.

8. If the stand is of lacquered brass, polish it with a duster, washing it occasionally with sour milk, lemon juice, or vinegar and water. If of bronze, rub it with a little vaseline, then polish with a duster.

9. Replace the various parts.

Do not wash chimneys, unless compelled, as they become more liable to break. If smoked, wipe them with paper before using the mop. If washing is essential, put a little ammonia in the water (not soapsuds, as they give a smeared appearance); allow them to drain until dry; a cloth causes smeariness. Half an inch air-space should always be allowed at the top of the reservoir to allow for expansion of the oil when heated, and to prevent the oil oozing through the mouth of the reservoir. The oil should be poured in from an oil-filler ($1/2$ each), the long narrow spout being placed in the opening to avoid spilling.

BURNER. Occasionally the burner should be allowed to boil in a little soda water; it can then be easily rubbed clean, and dried with a soft cloth in front of the fire before use. Now and then the reservoir should be filled with a little hot water and soda; but it must be well dried before any oil is put in, as any water left would make the light flare up.

The smell of a lamp is often due to the oil remaining on the surface, and not being properly wiped off.

Should a lamp be upset, and the oil set on fire, never throw water on it, as this only acts as an agent for floating the burning oil from place to place, and thus adds to the danger; the flames should be smothered by a heavy rug or mat, wet earth, or damp sand.

LIGHTING A LAMP. For this purpose a match or taper should be used—not paper, lest the ash fall on the wick and make the flame uneven. The light should not be turned on full for a minute, to allow of the gradual expansion by heat of the glass, when the cloudiness on the chimney—caused by the damp air inside—has passed off. It is a mistake to believe it an economy to keep a lamp turned down low, as quite as much oil is consumed, and an unpleasant smell is the only result.

TO EXTINGUISH A LAMP. Where there is no patent extinguishing arrangement it must be remembered that blowing

down the chimney leads to pernicious results ; the wick should be turned low, and one sharp puff be given *across the top* of the chimney. Another method is simply to lower the wick, and to place a circular piece of metal over the top of the chimney.

COLZA OIL. This vegetable oil is very rarely used now, as owing to its viscid nature, and the difficulty in forcing it to ascend the wick, a special variety of lamp is necessary.

SPONGE OR SPIRIT LAMPS are also unpopular. The container is filled with sponge or cotton wool, which is moistened with benzoline ; a very small flame results. The benzoline being highly inflammable, great care is necessary.

A useful little lamp giving a small light for a landing, back-stairs, etc., is the "Little Mannikin, price about 1/-. It burns 150 hours at a cost of 1d., and being weighted, it cannot be upset.

The symphelite spirit lamps, costing from 1/- to 1/6, for boiling a kettle, are exceedingly safe and portable, as the methylated spirit is absorbed, and consequently there is no free spirit to escape. The petrolite lamp also has a reservoir containing an absorbent block of kieselguhr and plaster of Paris which is soaked in petrol, and the vapour arising from it is consumed in a Bunsen burner. If the lamp is overturned, the light immediately goes out, there being no free liquid in the reservoir.

The Blanchard lamp, whilst having 500 candle-power, consumes but 1 gallon of oil in 32 hours, which bought in large quantities at 6d. per gallon reduces the cost of the use of the lamp to $\frac{3}{8}$ of a penny per hour—1200 candle-power is obtained for $\frac{1}{2}$ d. an hour, or 100 candle-power at the rate of 16 hours for one penny. The heat necessary to vaporize the oil for the lighting of the lamp is derived from the ignition of a small quantity of methylated spirit beneath the burner. Afterwards the required heat is supplied by the combustion of the oil in the burner. A pump is fitted to the container for supplying the air pressure, which forces the oil from the container to the burner. Bracket lamps of this make are to be bought for £2 16s., while table lamps of polished brass cost £3 16s. With these lamps there is no smoke, smell, or danger of explosion, and an excellent light is produced, which can compete successfully with the most up-to-date and advanced incandescent gas or electric lighting.

One can truly say that they represent the triumph of oil ; and they cannot be too highly recommended.

ELECTRIC LIGHT. This, no doubt, will, in the not very remote future, supersede gas, just as gas, early in the nineteenth century, took the place, more or less, of candles and oil.

There are many advantages in its use as compared to other modes of illuminating.

1. It is cleaner than any other.
2. It gives no trouble, and is easily kept in order.
3. It is cooler.
4. The light is better.
5. It is safer than lamps or gas.
6. It is more economical (*a*) in that it can be switched off and on at once ; (*b*) being more cleanly, it involves less labour, fewer new wall-papers, repainting, etc ; and in some places is actually cheaper than gas.

7. It does not destroy gilding, tarnish silver, or injure plants.

An electric meter is very similar to those used for measuring gas. Where electric mains are in the street, it is not an expensive matter to have the house wired and connected. The average cost per light is 23/- to 25/-, which includes wiring, a plain pendant, fitting and shade. Electricity is sold by the unit, and one unit will light an eight-candle power lamp for thirty-five hours. The small glass bulbs, which vary in cost, become darkened after some months of use. When this is so, they should be renewed, as the light is consequently somewhat dimmed. The old bulbs cannot be cleaned, because if opened the carbon filament and the necessary vacuum would both be destroyed. To prevent waste of light (1) use suitable lamps for the voltage supplied (eight candle-power lamps for small rooms and passages) ; (2) switch-off at once after use. There is not likely to be any loss through leakage if the wiring is well done. There is also a minimum danger of fire now, provided the fittings comprise a fuze-box to cut-off the current received at too great pressure.

CANDLES. These are the most costly method of illuminating ; but no light is so soft and restful to the eyes. Care should be taken in carrying a candlestick to hold it straight so as to avoid dropping grease about. Lighted candles should not be set in a draught, as they "gutter" and waste. They

should be bought some time before use to harden. If wax candles become discoloured with keeping they should be gently rubbed with spirit of wine.

Savealls are economical, as by their use all candle-ends may be used.

For piano sconces the variety made for this purpose alone should be used, as the vibration often causes the ordinary kind to drop melted grease on the keys.

Before use all candles should be firmly fixed into the sockets of the candlesticks to avoid spilling the wax or burning crookedly. For this reason self-fitting candles with a graduated base are to be recommended—a small band of neatly folded paper may be used as a substitute, or if the candle be dipped into very hot water, it can then be moulded to fit the space exactly.

NIGHT LIGHTS

The best fat for their manufacture consists of drippings or small ends of candles, to which has been added some white wax (3*d.* per oz.) thinly shredded. These ingredients should be melted together, then poured into tin rings or bottoms of pill-boxes. When cooling, but not solid, a wick made of twisted cotton should be put into the centre of each.

CHAPTER IX

Grates

Economy of Fuel—How to clean and blacklead a Grate—How to lay a Fire—How to clean a Gas Stove—Oil Stoves.

KITCHEN GRATE. There are a few points which should be borne in mind when selecting a kitchen range.

DURABILITY. In some cheap ranges the material is of such an inferior quality that it quickly wears out. One should be chosen of which duplicates of the various parts can be purchased, so that the parts which are subjected to the intensest heat can be replaced when worn.

ECONOMY IN FUEL. Some ranges are so badly put together that much coal is wasted in trying to heat the ovens, the heat thus engendered escaping meanwhile through some cranny. Occasionally the fire-receptacle is so small that it cannot contain sufficient fire to heat all the surfaces. On the other hand, some ranges possess so large a fire space that the oven and boiler become over-heated, and much unnecessary fuel is used.

Those grates which can be used both as a closed range and open fireplace are the most convenient.

ECONOMY OF FUEL. One of the chief ways of economizing fuel is to use up the small coal simultaneously with the larger pieces. It sometimes happens that the small is allowed to accumulate until the cellar is nearly half-full of it; then fresh coal is ordered, and at once the larger pieces are used, whereupon we are told "nothing was left of the first lot but dust, and that it is not possible to light a fire with coal dust." This is incontrovertible; but coal-dust is invaluable for keeping up a good fire. Moderate-sized pieces should be put on with a pair of tongs, and then some coal-dust lightly sprinkled from a shovel so as to fall between the cinders and fill

up the hollows beneath. Or the coal-dust may be mixed with a little water: this answers well for a fire which is to be kept in a long time without attention. Briquets are simply made in this way. "Backing" is the name given to this process of putting small coal on to a good fire and sprinkling it with water; this is usually done to kitchen fires when the morning's cooking is completed. Constant poking is the cause of much extravagance in fuel, and also causes dust in the room, as well as more soot in the chimney.

August is the best time for laying in a store of coal, as it can then be bought at summer prices.

CINDERS. The sifting of cinders is a great economy (only the actual ash should be thrown away), the cinders being most useful for "backing," also for lighting fires, because being so porous they are soon brought to a state of combustion.

COKE is coal with its volatile gases removed; it is useful and economical, being in many towns much cheaper than coal, and producing a clear smokeless fire. Good ventilation, however, is necessary; if people sit very near it the fumes cause headache and flushed cheeks. To increase the heat by generating steam, sprinkle it slightly with water.

WOOD, where it can be purchased cheaply, forms a very pleasant fire. Old sleepers from the railway lines cut up into suitable lengths are invaluable; and containing so much creosote, they quickly blaze up.

PINE CONES. Owing to the amount of turpentine they contain, they rekindle fires very quickly, and produce a fragrant blaze. Dried orange-peel is useful for lighting or rekindling fires.

PEAT, formed by the partial decay of vegetable matter, especially of various mosses, is used much in Ireland, and produces a pleasant odour.

HINTS TO A MAID REGARDING MANAGEMENT OF FUEL

1. Ascertain position of all flues, and clean them thoroughly.
2. When cooking is finished, and very hot water is not required, push in the boiler and oven dampers, to check draught and save fuel.

3. Use small coal, and back the fire up with potato-parings when cooking is over.
4. Never break up one block of coal on another ; this is how "small" is produced..
5. Try to use up the small coal equally with the larger pieces.
6. Sift all cinders, only throwing away the ash.

CLEANING OF A KITCHEN RANGE

1. Remove all ashes and cinders from the fire-box, hearth, and ash-pan.
2. Draw out the dampers, and lift out the highest soot door of the flues.
3. Sweep through this opening with a flue brush as high as possible.
4. Sweep each flue in turn, only uncovering one at a time to prevent the soot from flying about. Sweep the soot from the lowest door into a shovel, brushing it also from the top of stove, top of oven, back of fireplace, top of boiler, or wherever it has lodged, and the oven itself should be swept. Unless there is a large amount of cooking, the flues do not require to be thoroughly cleaned more than twice a week.

Good strong flue-brushes, which are long and narrow with pliable handles, can be purchased for 1/6 each.

5. If very greasy, the stove should be washed with hot water and soda, or rubbed with a cloth dipped in turpentine, before blackleading.

6. The tiles should be washed with soap and hot water.

7. The oven shelves should be washed free from grease with hot water and soda.

For the convenience of those who prefer to blacklead the kitchen grate after all the cooking is finished, mention must be made of "Enameline," which can be used with great success on the hot metal, ordinary blacklead being always put on while the stove is cool.

8. The hearth, if whitened, is treated in the same way as stone steps (see Chapter XXVI.).

CLEANING OF A GAS STOVE

1. Take out the bars from the top, wash in very hot water and soda, then polish them and the gas-rings with blacklead.

2. Clean the brass taps.
3. Clean and burnish any part made of steel.
4. Clean the oven shelves with hot water and soda.
5. The enamelled parts must be rubbed with a flannel dipped in salt.

GAS LIGHTING-BACK IN STOVES

This is usually caused by—

1. Either a leak adjacent to tap admitting too much air, thus causing the correct proportion of air and gas to be destroyed.
2. A draught blowing on the burner, and thus admixing too much air.
3. Particles of dust, silica, or black lead partly blocking the burner, so that the supply of gas is not sufficient and only air from the air-chamber is burnt.

REMEDY—

1. Mend the leak, thus preventing the entrance of air.
2. Close the window.
3. Clean out the burner carefully. In either case relight the gas.

CLEANING AND BLACKLEADING A GRATE

1. Put on a pair of old or housemaid's gloves, which can be bought from 9d. a pair, and can be easily washed ; remove fender and fire-irons.

2. Spread a hearthcloth to protect the carpet. Sacking can be used ; but the most satisfactory plan is to make them of hessian (7½d. per yard), double width ; 2 yards making two, as the half-width is sufficient. Sheets of brown paper or newspaper can be utilized.

3. Lift out the larger cinders, and sweep out gently the smaller pieces and ashes , remove the register, and sweep behind and around it ; sweep up the hearth and sift the cinders in a cinder shovel over the housemaid's box, so that the ash falls in and the cinders are retained, part being used for laying the fire, and the remainder mixed with coal and placed in the coal-box.

CINDER-SHOVELS. Cinder-shovels cost 7½d. each, and

when there is not a large amount of cinders they can be used, and are more convenient than carrying out the cinders into the yard and sifting them through a round cinder-sifter (1/-) over the ash-bin.

4. Thoroughly dust the bars and the whole of the grate, as unless all dust is removed the blackleading will be grey. Dusters should be kept specially for this purpose ; black ones are most suitable, as their use prevents the possibility of misuse.

5. **MIXING BLACKLEAD.** The blacklead should be mixed with warm water to the thickness of cream, then a few drops of turpentine added, as this removes any grease, and causes the blacklead to dry quickly. It is a mistake to mix the blacklead with turpentine solely, as it does not dissolve the lead so thoroughly, and causes it to be lumpy.

6. **HOW TO BLACKLEAD.** Commence at the top of the grate, and apply a little blacklead with a small round brush ($1\frac{1}{2}$ d. each) as lightly as possible ; brush it off almost immediately with a hard brush ; then begin the polishing with a softer brush ; and lastly, to obtain a brilliant polish, use the softest brush. A final rub with a piece of black velveteen adds still more brilliancy. It must be remembered that very little blacklead should be used, or the polish is hard to obtain ; also only a small portion should be blacklead at a time, because if it becomes dry before being polished the grate will be dull. Blackleading not only improves the appearance, but it preserves the iron and keeps it from rust.

Housemaids' boxes can be purchased from 2/- to 5/- each, the more expensive ones being larger and provided with a fitting cinder-sifter.

An excellent substitute is a margarine-box, black enamelled, with a hole bored through two sides, and a rope handle inserted.

A tiled hearth and curb should be washed with warm soapy water, and be quite dry before the fire is relighted. The tiles must not be washed while hot, as they are liable to crack.

HOW TO LAY A FIRE. Place two or three pieces of cinder at the bottom of the grate ; on them lightly put a few pieces of crumpled paper, so that the air is retained in the folds. Next come the sticks, which may be either crossed over one another with air spaces between (the ends resting on the bar to prevent their pressing too heavily on the paper), or they may be

placed in an upright position (tent shape) so as to catch the draught. Lightly put over them a few pieces of coal, about the size of a hen's egg, and a few cinders. When well burnt up, add a little more coal. If well laid, one match applied to the paper should be sufficient to light the fire.

The great secret is to have all the materials perfectly dry, and to arrange them in such a way as to leave plenty of air space, for if the supply of oxygen is cut off the fire will not burn. Too much paper puts the fire out, as it contains hard substances which will not ignite.

ADVANTAGES OF CLOSED OVER OPEN STOVES

1. More space for cooking; more pans can be kept in use.
2. The heat is more regular and uniform.
3. The saucepans do not become so sooty and smoked.
4. There is no danger of soot falling down the chimney into any food that is being cooked.

OIL STOVES. If possible, these should be kept in an out-house, as they are less liable to be knocked over, and the fumes can escape more readily. They are made of tin, and usually have two large reservoirs for oil. If they are to be successfully used and the smell of oil avoided, a few points must be borne in mind.

1. They must be kept perfectly clean.
2. Good oil must be used, and the stove should be thoroughly wiped lest any should be on the surface.
3. The wick must be evenly trimmed and attended to frequently.
4. Tin utensils must be used, as they are lighter.

These stoves are convenient in summer, where gas stoves cannot be used, and are cheap, costing about £2 10s. But being of tin they quickly rust, especially if exposed to damp, they are easily knocked over, the fumes are unpleasant and unhealthy, and they require constant attention to keep them clean.

Small spirit lamps are convenient for heating liquids or boiling water. They can be used anywhere, as no special ventilation is necessary; they are, however, very inflammable.

CHAPTER X

Beds

*Choice, Care, and Cleaning of Bedsteads, Mattresses, etc.—
Suitable Qualities and Prices—How to air and make a
Bed—Blankets—Sheets—Daily Work of Washstand—
Order of Work.*

COWPER, in his poem, tells us of the origin of the sofa, how from stools supported by three legs was evolved the idea of a massive slab (supported by four legs), wadded and covered with colours variously wrought. The origin of beds seems to be lost in the dim past ; but from old engravings we can see that in the times of Edward IV. they were very gorgeous. At Knole, in Kent, the bed on which James I. slept is shown, with its curtains of cloth of gold costing £8000. Most of us can remember in old houses seeing huge four-posters, which are now happily obsolete.

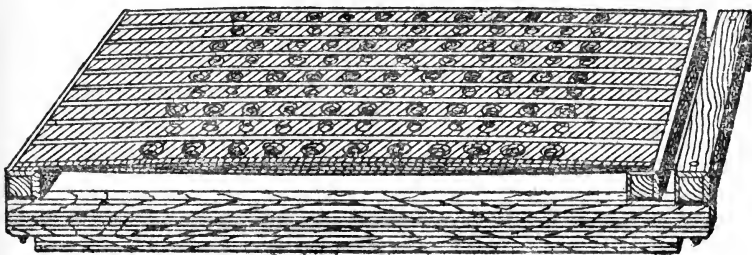
One improvement has been the substitution of metal for wooden bedsteads, metal not affording hiding-places for insect life or disease germs, though even metal bedsteads should be wiped over once a year with a cloth dipped in a solution of carbolic acid. The wooden bedsteads, at present on view, are certainly most artistic, but will probably prove to be a passing fancy, as the objections to them are beyond answer.

PRICE. Black-japanned iron double bedsteads, with brass rails and knobs, may be bought for £2 10s. ; more substantial ones of the same variety for £3 10s. Plain single iron bedsteads cost from 19/- to 21/-, including the wire mattress. Brass bedsteads vary from £9 to £15 and upwards ; the very best quality in solid brass and exceptionally handsome design costing as much as £100. Twin bedsteads vary from 10/11 each to £13 13s. the pair for ordinary use.

CHOICE. It is well to avoid those that have very intricate work at the foot, as it requires much time to eject all dust ; plain, massive, round or square supports are easily dusted and always look well. The simpler a bed is the healthier ; curtains only harbour dust and keep off air ; even a valance is not desirable, as it prevents a free circulation of air under a bedstead, and tends to encourage the utilization of that space into a boxroom. A fine linen sheet, prettily trimmed with coarse torchon lace, spread over the mattress and falling below the counterpane, makes a dainty finish. For those who wish a bedstead of handsome appearance the "Italian," with its hinged curtain-rails, is advisable, as at night the draperies can be placed flat against the wall.

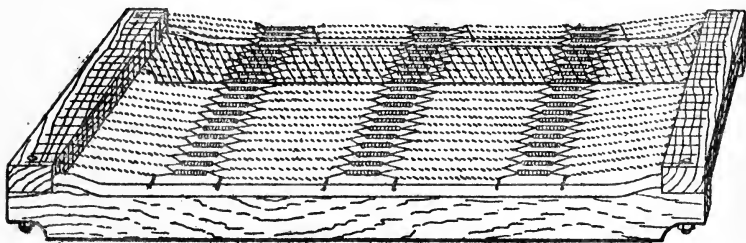
WIRE MATTRESSES

1. **SPIRAL SPRINGS.** These are old-fashioned and comfortable, but apt to get out of order.

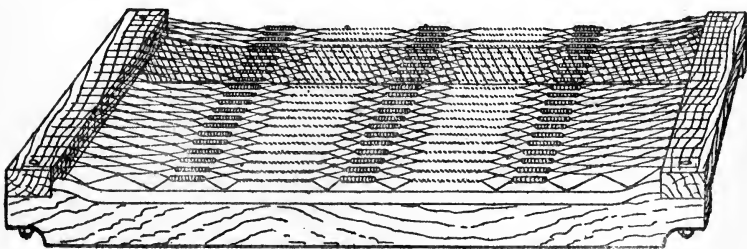


2. **DOUBLE-WOVEN STEEL WIRE.** These are strong and comfortable.

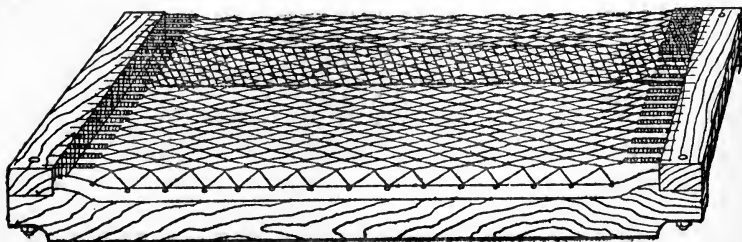
3. **SPRING CHAIN.** In these the steel wire chains are placed about 2 inches apart, and are crossed at intervals with supports to prevent them sinking in the middle.



4. **CHAIN AND MESH.** These are cheap, flexible, and strong.



5. **CANADIAN MESH.** These are made of steel, copper-coated and lacquered.



Most wire mattresses are provided with screws at the end, which can be tightened if after use there is a tendency to sinking or "sagging."

PALLIASSES are made of wheat straw, and cost about 5/- for a single bed ; they are not very general nowadays.

BOX MATTRESSES are also old-fashioned, but are liked by those who care for a high bedstead. The ventilation is not as good as in the case of wire mattresses, and they are not as cleanly, and if by any chance vermin should get into them there is no cure. They are too cumbersome for one person to lift.

FEATHER BEDS are most unhealthy, the body sinks down into them, thus preventing the escape of perspiration, and making ventilation difficult ; they are very heating, and in case of illness the nurse's duties become most difficult. They require to be well shaken every day, and occasionally the feathers should be cleaned.

UPHOLSTERED MATTRESSES

HAIR MATTRESSES are very comfortable and healthy. A good linen tick is necessary or the ends of the hair work through : they cost from about 27/- to 49/- for single beds, and 52/- to 76/- for double ones ; the hair varying in price from 8d. to 2/6 per pound. They are delightfully springy, and if after some years' wear they become flat, they can be sent to an upholsterer's, where the hair will be re-curved, and 2 or 3 lbs. of new hair added, and the mattress will again be like a new one.

WHITE WOOL (6d. to 1/- per lb.). These are very soft. The wool is obtained from blanket manufacturers ; it consists of fluff too short for weaving. They are almost as expensive but not as springy as hair mattresses, costing from about 25/- for single bed.

HOW TO TREAT WOOL MATTRESSES. If after long use they become lumpy the following treatment is beneficial : Take the mattress into an unused attic or empty room ; lay a sheet on the floor ; take out the rounds of leather and rip one end, emptying the mattress on the sheet. The wool will be found in lozenge-shaped lumps ; pick these apart with the

fingers. The tick should be washed, starched, ironed, and if possible polished with a polishing iron, as the slight glaze keeps it clean longer. Replace the picked wool, keeping the mattress even on the floor. This is a rather tedious operation, but quite within the scope of home accomplishment. There is usually 27 lbs. of stuffing in single beds and 40 lbs. in double.

HAIR AND WOOL MIXED. This is often used to fill mattresses, but it is not to be recommended, as the hair helps to bind the wool in lumps.

FIBRE. This comes extensively from Algeria, and is sometimes used as a cheap substitute for hair; it is light, healthy, and springy ($3\frac{3}{4}d.$ per lb.).

BROWN WOOL, obtained from carpet-combings, is used for very cheap mattresses. It very quickly becomes hard and lumpy; it varies from $2\frac{3}{4}d.$ to 1/- per lb., single mattresses from 10/11.

FLOCK should only be used for beds which can be well shaken, never for mattresses, as being so short in the fibre it quickly becomes hard and lumpy (from $2\frac{3}{4}d.$ to $5\frac{3}{4}d.$ per lb.).

ALVA, which is a dried seaweed ($5d.$ per lb.), should be avoided, as it retains the damp and breeds moths.

OAT CHAFF is useful for mattresses for young children, as it can be renewed frequently; it is clean and sufficiently warm without being heating.

CHOICE OF TICKS

LINEN. The best quality is used mostly for feather beds and pillows, and costs $3/6$ per yard. It is closely woven, bright in appearance, of a fair thickness, has usually a navy-blue and white stripe, and, like many ticks, is 63 inches wide.

BELGIAN TICK is most commonly made of cotton, and varies in price from $6\frac{3}{4}d.$ to $1/6\frac{3}{4}$ per yard. It is softer than that made of linen, and is used for mattresses more than beds. It may be had from 58 to 63 inches wide. Check mattress tick (large navy-blue and white check) is generally all cotton. It is 87 inches wide, and about $2/6$ per yard.

UNION TICK has the warp threads of cotton and the weft of linen. It wears very well and costs about 1/- per yard.

DUNDEE TICK is used principally for sailors' beds, as it does not readily absorb moisture, and dries more quickly.

WIRE MATTRESS COVER

To prevent the bedding from friction the wire mattress should be covered. For this purpose Hessian (sold at 7½*d.* per yard, double width) is the best material. Felt is not advisable, not being porous; brown paper bored with holes is a cheap substitute, but very apt to be torn.

MATTRESS COVERS

The tick should be covered with holland or calico, a loose case tied with tapes is the most satisfactory. If this is too expensive, wide strips of either of the above materials should be tacked over the edges of the mattress to keep them clean.

BOLSTERS

Are made both with round or square ends. They are often filled with millpuff, which is a product of the cotton plant, and of which there are different qualities, varying from 1½*d.* to 5*d.* per lb. Comfortable small single-bed bolsters usually cost from 4/- to 5/-.

COVER. The tick should be covered with a calico cover, to preserve it in case of accident, and also to prevent the stripe of the tick showing through the outside bolster case.

Bolster cases are a much more comfortable arrangement than simply having the under sheet rolled round the bolster.

PILLOWS

These are usually made of down or feathers, the latter being cheaper and more general.

DOWN is stripped from feathers, mostly goose; but the best quality is procured from the Eider duck, a native of Iceland. Such pillows cost from 16/- to 20/- each.

FEATHER. The cost of the size for small single beds usually runs about 4/9 to 5/-. All feathers must be chemically treated to destroy the animal matter adhering to them. If this is neglected the smell soon becomes unpleasant. Feather beds and pillows after being long in use become matted together, and for this reason they must be daily well shaken.

Occasionally the tick should be emptied and the feathers picked apart. Before putting feathers in new or washed tick, the inside (unless it is of superlatively good quality) should be prepared by rubbing it very thoroughly all over with a lump of beeswax or yellow soap, giving special attention to the seams ; if this is omitted the sharp points of the feathers will work through. If the pillow is new, slip the feathers in with the bag and shake gently out ; if the tick only is new, sew the opening in the new tick to the old one, and so take the feathers from one to the other without any flying about the room.

COVERS. Pillows should also have a cover for the aforementioned reason.

SLIPS. Linen pillow-slips are cooler and more restful than cotton ; they should be so made that they button without gaping, buttons being a neater method than tapes. By the use of tubular cotton ($4\frac{3}{4}$ d. to $9\frac{3}{4}$ d. per yard) much labour is saved.

The end of the pillow, where the inner cover is fastened, should be put first into the outer pillow-slip to avoid having both fastenings at the same end.

Pillow shams are much used at present ; they should be removed by night.

BLANKETS

This name is derived from the inventor, Thomas Blanket, who in 1340 first set up his looms in Bristol. They are usually sold in pairs, but should be divided and the edges "neatened" with blanket stitching, either worked with a rug-needle or a crotchet-needle. The best quality run about 35/- per pair. Those made at Witney have a coloured border, and are very thick and fluffy, the wool on the surface being combed up by teasles.

COST. Perhaps the softest of any are the Austrian blankets, costing £3 a pair. These are pure white, have no border, and are generally bound at the top and bottom with a coloured ribbon. Cashmere blankets are also very soft and light. Witney blankets, although much thicker than cloth ones (as the wool is pulled loosely on the surface by the use of teasles), do not wear better, as in their case much of the surface fluff is either lost or flattened in washing. Good cloth blankets average from 17/- to 20/- per pair. Small ones, for single beds, can be bought for 10/- per pair. Brown ones are sold from 2/6

the pair, red ones, being of better quality, are higher in price ; and large single flannelette ones cost about $2/3$ each. Union blankets are a mixture of cotton and wool, and are therefore harsher to the touch. Welsh blankets are light in weight and very durable ; they, too, are somewhat rough, and usually cost about $2/1$ - the pair. Brown-paper perforated blankets are warm ; and for the very poor even newspapers stitched together, with a few holes bored, add greatly to the warmth of the sleeper.

New blankets being more porous are healthier than old ones. These latter serve admirably for underblankets, and when too decrepit for that use they make capital floor and paint cloths. It is usual when purchasing to allow three for each bed. Where means are limited, it is an economy to buy two small blankets and one large one to tuck well in outside the smaller ones.

MENDING. Thin places should be darned with wool of the same colour : turning the two selvages to the middle lengthens their existence.

Now and then they should be shaken in the open air, as too frequent washing is apt to make them shrink and become hard. When out of use during the summer months, after being washed they should be folded neatly, sprinkled between the folds with small pieces of camphor, bitter apple, or Russia-leather parings, sewn in an old linen sheet or large piece of holland, leaving no gaps through which the ubiquitous moth can enter.

Camphor or cedar-wood chests are safe keeping-places, but unfortunately so expensive that they are not within the reach of every one.

SHEETS

MATERIAL. Cotton is undoubtedly to be recommended for this purpose ; it is cheaper, warmer, and more healthy than linen for those subject to colds and rheumatism. Linen, however, is very durable, and sheets made of it can be cut down the middle, and the two selvages sewn together to form a new centre when worn ; whereas cotton usually wears equally thin all over.

Unbleached twill cotton is very strong, and, after being washed a few times, becomes white, and remains a better colour than those sheetings which were white when purchased.

QUANTITY. The usual allowance is three pairs to each

bed, or five pairs to two beds of the same size, three pillow-cases being allowed to each pillow.

COST. Very good linen sheets, 3 yards in length, cost about 17/- per pair ; good unbleached sheetings are sold at 1/1 per yard.

SIZE. It is important that sheets should be a suitable size for the bed for which they are intended. For a single bed 72 inches and for a double bed 90 inches is a convenient width ; $2\frac{3}{4}$ or 3 yards is the usual length, remembering that when the bolster is to be rolled in the sheet it takes up quite $\frac{3}{4}$ yard. Ordinary bedsteads are 6 feet 6 inches long.

Sheets should have a $\frac{1}{4}$ -inch hem at the foot and a 1-inch hem at the top : this distinction helps to prevent the foot part being placed near the face. Unless there is an embroidered initial or monogram on the top fold, the name of the owner should be marked on the lower left-hand corner.

Sheets should be changed once a fortnight, and clean pillow-cases should be given out each week.

COUNTERPANES

Marcella counterpanes (costing from 14/11 to 16/11) should be removed at night, as, being heavy, they exhaust the sleeper, and, being non-porous, they prevent the escape of the emanations of the skin.

Bolton sheeting ($9\frac{3}{4}$ double width), prettily embroidered, muslin, or bedspreads made up with lace insertions, are elegant and light. Cretonne covers matching the draperies of the room are both serviceable and dainty.

Eiderdowns are much cheaper than formerly ; very good ones can be bought from 20/- to 25/- upwards. Toraliums, a cheap substitute, can be purchased at as low a price as 3/6 ; these should be perforated to ensure ventilation. During the summer they should be well shaken, folded up with some moth preventative, wrapped in brown paper (pasting up the paper to keep it quite air-tight), and placed in a large drawer or chest.

HOW TO AIR A BED

1. Open windows top and bottom.
2. Take off the top clothes one by one and place on two chairs, with the seat turned towards foot of bed.

3. Beat and shake pillow and bolster, and place near window.

4. Remove lower clothes one by one and spread.

5. Turn mattress so that air has free access to every part by arching it on its two ends.

6. Spread night-vest and night-dress near window.

7. If convenient, leave door open to flush the room with air.



At least one hour's airing is necessary ; each member of a household should attend to this before leaving the bedroom. The warmth of a bed conduces to the free escape of perspiration, little particles of skin rub off, and possibly disease germs with which the occupant has come in contact during the preceding day. For these reasons a thorough airing is required ; if this be neglected, the bedroom acquires a close, stuffy smell, and the health of the occupant will soon be affected.

HOW TO MAKE AND TREAT A BED

1. Weekly brush mattress and dust bedstead.

2. Turn mattress from side to side and top to foot alternate days to equalize pressure and wear.

3. Tuck in the under blanket free from wrinkles.

4. Place the under sheet in the same way if a bolster-case is used ; otherwise roll the sheet round it.

5. Place the bolster and pillow in position with the hems turned downwards. If one side of the bed is near a wall, put the end of the pillow where the fastening comes towards the wall.

6. Put the top sheet on wrong side out, with a good margin at the top.

7. Tuck in the blankets, having the margin at the foot.

8. Fold over the extra length of sheet at the top over the blankets.

9. Put the counterpane on so that it hangs evenly and smoothly.

N.B.—Be careful to notice that the narrow hem of the sheets and the marking of the blankets come at the foot of the bed.

ATTENTION TO WASHSTAND

APPARATUS:—1 can hot water, 1 can cold water, 1 basin and 1 chamber cloth, 1 chamber dry towel, 1 glass-cloth, slop pail, a little crushed soda, a piece of some material to lay down to protect carpet.

1. Empty chambers into the slop pail.
 2. Empty water from basin into them, then into the pail.
 3. Put a little hot water and crushed soda into them.
 4. Pour some hot water into the basin ; in it wash the soap-dish, tooth-brush stand, outer part of jug, and dry them.
 5. Empty and refill the bottle, wiping the outside. Wash the glass in cold water and dry thoroughly, using a glass-cloth. Once a week clean with tea-leaves, etc. (See Chapter XIX.)
 6. If the washstand is marble or tiled, wash and dry it.
 7. Empty and dry the basin.
 8. Fill the jug with clean cold water.
 9. Empty chambers, rinse with cold water and dry them, using a special cloth or wool mop to wash them before rinsing.
- The jug should be washed inside weekly (to prevent discolouration) with a little soda in the water. The cloths used should daily be scalded in boiling water, well rinsed in cold, and then hung in the open air. The pail should have the same treatment, and once a week (on washing day) should be thoroughly cleansed with hot soap-suds.

ORDER OF WORK FOR SEVERAL BEDROOMS

1. Open windows top and bottom, and air beds in each room.
2. Begin at the room which was aired first, and attend to its washstand, proceeding to the others in the order of airing.
3. Begin at first-aired room and make bed ; follow on to the remainder.
4. Begin to take up bits in the first room and dust it, going on in the same order to the other rooms.

TO MARK BLANKETS

Tack on to the left-hand lower corner a few inches of woolwork canvas ; on it, with a rug-needle and coloured wool, work the necessary letters in cross-stitch. When complete, pull out the threads forming the canvas.

CHAPTER XI

Table Appointments—Laying of Table

*Care of Butter and Jam Dishes—Salt—Cruets—Decorations—
Order of Dinner.*

IN order that a table may always look inviting and dainty, many little points must be attended to daily.

BUTTER. Butter-dishes should be washed and refilled; large pieces should not be put on, as they quickly become messy. It is better to have two dishes, with a neat slice or a few balls in each, garnished with a few tiny sprigs of parsley. In very hot weather the butter-dish may have a little cold water in it if ice is not available.

JAM. Jam and marmalade should be put out in small quantities, and the remainder replaced in the jar it was taken from, and the small dish washed. Marmalade jars, from 6½ d. upwards, with a lid and a niche for a spoon, are convenient where marmalade is in daily use for breakfast.

SALT. Salt-cellars should be washed once a week and thoroughly dried before refilling: daily they should be replenished and tidied, either smoothly on the surface, or in some ornamental mode. Where silver or plated cellars are in use, it is especially needful to attend to them regularly, as verdigris quickly forms. Most metal cellars now have glass linings, which to a large extent obviate this difficulty. Salt-spoons should never lie in the salt, for the above reason.

TO PREPARE TABLE SALT. Place two large lumps of ordinary salt on a plate on the rack, or in a cool oven, to become quite dry; then rub the two together till all is light and powdery, adding either arrowroot or cornflower in the proportion of one heaped tablespoon to 1 lb. of salt; this prevents it from becoming damp and lumpy.

CRUETS. Large cruets are not often used in a central or any other position nowadays, having been supplanted by small pepperettes, small salt-cellars, and small mustard-pots. These are usually placed in a group at each corner of the table ; and, where means are not limited, they are to be found in front of each guest. Plated articles may be bought from 4/6 each ; solid silver costing from 7/6 upwards, according to the pattern, size, and weight.

WASHING. The ordinary glass castors should occasionally be washed in warm, soapy water, well rinsed in cold water, and thoroughly dried. Thorough drying is absolutely essential, as any water left causes the contents to deteriorate.

MUSTARD should be of such a consistency that it will not run when put on the edge of a plate, nor should it be too thick ; a pinch of salt improves the colour. It is better mixed in a small jug with a well-defined lip, as it is easy then to put it in the pot without soiling the edges and side.

SUGAR-BASINS should be replenished when necessary ; daily they should be attended to, lest there be any sticky place or finger-marks.

BUTTER OR SCOTCH HANDS. These useful implements are sold from 7½d. per pair, and with their aid butter may be made up in various forms. They should be scalded in boiling water, and then allowed to remain for a short time in cold water containing salt, as, unless so treated, the butter is apt to stick to them.

Before laying the cloth for any meal, everything necessary should be collected together, and the right number of spoons, forks, glasses, etc., counted out and put in readiness.

BREAKFAST is so simple in its appointments that no reminders are here necessary, beyond a hint to the effect that everything necessary should be on the table, thus avoiding the necessity for ringing for a missing cup, fork, plate, etc. ; that the dishes should be hot ; that a good supply of hot milk accompany the coffee ; and that the toast should be properly made.

LUNCHEON. This is quite an informal meal, with very little, if any, waiting. Elaborate table-centres and abundance of flowers are out of keeping ; only a plant and one or two vases

of flowers are customary. The bread should be cut in thick pieces. A chair should be placed for each person.

DINNER. The table should be of a suitable height, shape, and size. Avoid one that is too narrow, as in that case there is very little available space for decoration ; round or oval tables are more sociable and accommodate more diners. After seeing that every necessary article is in readiness, proceed as follows :—

1. **LAY THE SILENCE CLOTH.** For this purpose an old table-cloth or a piece of serge or felt is needed ; preferably undyed felt, the use of which avoids a stain if water is upset. This helps to deaden the sound, protects the table from being marked with hot plates and dishes, and causes the linen cloth to lie more smoothly.

2. **LAY THE LINEN CLOTH.** The centre fold should be placed on the centre of the table, and the hand put underneath to draw out the cloth, first one side of the table and then the other. If a cloth be roughly “flapped” on the table, it will become creased, and will not lie flat. See that it hangs evenly, and that the three central creases are straight. If objected to, these creases may be removed by the use of a cool iron.

3. **IN ARRANGING THE TABLE-CENTRE AND FLORAL DECORATIONS** remember that a substantial centre-piece often interferes with the conversation and view of the guests, and that a light feathery effect is more pleasing. It is wise to avoid flowers of a strong scent, as many people become faint if compelled to inhale such scents for any length of time.

4. If the dinner is not *à la Russe*, arrange the cruets, mats, and knife-rests.

5. Place two tablespoons at each corner, and the carving knife and fork in front of the carver's seat ; the soup-ladle in front of the hostess.

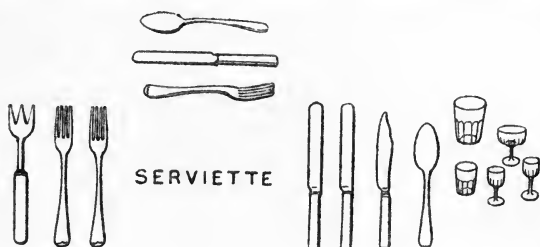
6. Put on the water-jugs. Either white-frosted, crystal glass, or ruby-red glass has a pretty effect.

7. Arrange the various knives and forks required for each diner in the order of use. At the extreme right hand, next to where the glasses will be placed, put a soup-spoon, a fish-knife, and two table-knives ; the second knife reaching the space where the plate will be. On the left hand, place two table-forks so that they come next to the space for the plate, then a

fish-fork. Above the space for the plate put a dessert-spoon and a cheese-knife, with the handles towards the right hand; below them a dessert-fork, with its handle towards the left hand.

8. The serviettes may be folded in various designs, and should be placed in the plate space, with a roll of bread in their folds.

Until quite recently it was usual to place the cheese-knife to the left of the large knives; this arrangement is still often to be seen, and is quite correct. In order to break the line, the knife



and fork which come next to those used for fish are sometimes placed rather higher.

9. The glasses should be at the right hand, next to the soup-spoon; they should be placed close together, with the highest glass farthest away from the diner, to avoid being easily knocked over. Three wine-glasses are usually provided, sherry, claret, and champagne; nowadays it is becoming customary to place a tumbler for either plain or aerated water. A final polish with a leather is usually necessary.

10. A chair must be placed for each guest. In winter the fire should be well attended to, and the room comfortably warmed beforehand.

When all is ready, the waitress should open the drawing-room door and say, "Dinner is on the table, madam," or "Dinner is served, madam." She should at once return to the dining-room, leaving the drawing-room door open. In many households the readiness of the meal is indicated by the sounding of a gong.

The sideboard should have a clean, white cloth, and on it the decanters and extra silver should be placed, also the bread board and knife. If no rolls are provided, the bread should be cut thick and square.

If there be also a dinner waggon, it should be reserved for the dessert wines, fruit, and the dessert plates. These latter should be in readiness, with a dessert d'oyley, a finger-bowl, filled $\frac{1}{3}$ full with tepid water (to which has been added a drop of perfume or a single floating flower), and a dessert knife and fork.

DESSERT. The dishes should be spotlessly clean, and the fruit wiped and looked over. Grapes may be cut into bunches of a suitable size, unless the bunch is very large, when it may be manipulated at table with the aid of grape scissors. Fresh fruit should be decorated with fresh green leaves if possible. It is permissible for the fruit to form part of the table decoration; but it certainly appears to be more inviting when it is only put on the table in time for dessert. Bonbonnières are usually filled with ginger, chocolate, preserved fruits, or other sweetmeats. Before dessert is put on the table, everything that will no longer be required should be removed, and the crumbs taken off with a scoop, which is less noisy and more effectual than a brush. When there are two waitresses, narrow damask slips are sometimes laid neatly down the table; before the dessert comes on these are quickly and quietly lifted off.

HINTS FOR A YOUNG WAITING-MAID

1. Her black dress should be neat and well brushed, her apron and cap spotless, her hair neatly and suitably dressed.
2. Her hands and nails should be perfectly clean.
3. She should avoid wearing creaking boots or slippers.
4. She should avoid eating strong-smelling substances (such as onions) before waiting at table.
5. She should be on the alert, and quickly and quietly hand whatever is wanted, and remove plates that are finished with.
6. She should take no notice of the conversation, and should on no account smile at any humorous remark or story.
7. Before clearing a table she should replace each chair in its usual place by the wall.

8. Dirty plates should not be piled on one another with knives and forks between. A two-divisioned wire basket, lined with a cloth or piece of folded white paper, should be used for the knives and silver. Plates are often placed in a circular basket reserved for the purpose, which costs, when lined with tin, from 5*s.* 6*d.* to 6*s.* 9*d.*

USUAL ORDER OF AN ELABORATE DINNER

Soup.
Fish.
Entrées.
Joints, Removes, or Relevés.
Game or Rôts.
Vegetables.
Entremets.
Cheese.
Dessert.

ADVANTAGES OF DINNER À LA RUSSE

1. The host and hostess are more able to enter into conversation with their guests.
2. It is more rapidly served, and is therefore hotter.
3. The quantity required can be more correctly calculated, as it is not necessary to have a handsome joint.
4. Each diner can take just the amount and the part preferred.
5. The table has more space for decoration.

CHAPTER XII

Carpets

Origin—Varieties—Prices—Spring Cleaning—Weekly and Daily Care—To Remove Grease, Oil, or Ink Stains—To Renovate Colours—Stair Carpets—Underlays—Floor Coverings—Linoleums—Cork Carpet and Oilcloth—Matting—Cleaning of Matting—Care—Price—Advantages and Disadvantages of Carpet Sweepers.

ORIGIN. The word carpet is derived from an old Italian word "carpetta," signifying a covering for floors. They are of very ancient origin, the Babylonians being specially renowned for their manufacture. It is uncertain when they were first used in England. In the twelfth century it was considered a great luxury to have the floors covered with clean straw. Queen Elizabeth is known to have had a Turkey carpet in her audience chamber. They have not been made in England on a large scale much over a hundred years; the art having been introduced into London in the reign of George II. (1750) by two men from France.

BRUSSELS carpets, which are largely manufactured at Kidderminster, wear splendidly, and are much cheaper than formerly; "five ply" are very durable, and for 4/2 or 3/9 per yard very good qualities may be purchased. They are made by passing threads through a canvas over a wire, which is afterwards drawn out, leaving the loops. A Brussels carpet may always be recognized by the pattern showing through on the wrong side. It is usually about 27 inches wide.

TAPESTRY carpets at a first glance resemble Brussels; but as they are only 3 ply there is much less wool on the surface, and the canvas can be seen between the loops; the

pattern in this case does not show on the back. It is not to be recommended for rooms where there is much hard wear. It is the same width as Brussels, and average qualities vary in price from $1/10$ to $2/9$ per yard.

WILTONS, which are noted for their rich "plushy" appearance, are manufactured in a somewhat similar mode to the Brussels; but the loops are cut before the wires are drawn out. They are 27 inches wide, and the cost is usually from $4/11$ to $6/6$ per yard.

AXMINSTERS are also pile carpets, and have the same rich aspect; the wool used is slightly coarser, and the pile is a little longer than in Wilton carpets. They are the usual width, and cost about $4/6$ to $6/6$ per yard.

KIDDERMINSTER carpets are suited for bedrooms rather than sitting-rooms. They are reversible, can be washed, and carpet may be bought by the yard of the same patterns as the woven squares. These three peculiarities recommend them to the economically-minded. On the other hand, they quickly stretch and form rucks or wrinkles; they soon lose their freshness, and are so porous that quantities of dust go through, necessitating their being taken up frequently.

These carpets now have many names, such as "Pembroke," "Woodstock," etc.; and many art squares, such as the "Dura" and the "Roman," are all varieties of the same material. Ordinary Kidderminster is 36 inches wide, and a good quality costs about $1/11\frac{1}{4}$ per yard. The squares vary from 19/- to £2, according to size and quality.

HEMP carpets are very tough; but not being wool their colour quickly fades, and they become dingy. They are a yard wide, and cost $1/1\frac{1}{4}$ per yard.

JUTE SQUARES, which are an imitation of Turkey, soon lose their bright colour, and are apt to appear dirty.

PLAIN SELF-COLOURED FELTS may be had in several shades; they are used as a surround to a contrasting carpet, or as a cover for the whole floor; rugs being laid thereon. They run to 48 inches wide, and cost $2/11\frac{1}{2}$ per yard.

Coloured patterned felts, or **DRUGGETINGS**, run about 45 inches wide, and cost $1/6\frac{3}{4}$ per yard; they are not durable.

TURKEY carpets are mostly sold to bazaar-keepers, and

then to European buyers who represent our large firms. These carpets are not made in factories, each worker having his loom in his own home. The pattern is usually a reproduction from memory of one taught by father or grandfather. English machine-made or Anglo-Turkey carpets wear well; but the dyes do not equal the foreign ones, as native plants which we cannot obtain are used in their manufacture. The price of a square 3 yards \times 4 yards in the latter would be £10 10s.; the same size in the Anglo-Turkey being £9 9s.

ANATOLIAN carpets are a modern Eastern fabric, closely resembling, but superior to, Turkey carpets, and only made in Anatolia. It is calculated that there are 30,000 hand-made knots in every square yard. A carpet of the before-mentioned size would cost £16 16s.

PERSIAN carpets, which are somewhat similar, are usually copies from the old Persian prayer-rugs.

AUBUSSON carpets are of French manufacture, hand-made, and very costly. They require to be firmly fixed, as, being so light in weight, they are liable to stretch and wrinkle.

SPRING CLEANING. The carpet should be carefully folded up in the room from whose floor it is taken, then carried some distance from the house; or, if this is not feasible, the windows on the nearest side should be closed. Spread it on the grass if dry, otherwise hang it wrong side out on the line. Beat it well with strong sticks or broom-handles, being careful that there are no splinters or rough places which would prove injurious. When dust ceases to rise with each blow, turn it on the right side, and treat it in the same way. If the grass be clean and dry, drag the carpet over it to freshen it; after which, sweep it with a carpet-whisk to remove any surface dust; it is then ready for relaying.

TO RENOVATE THE COLOUR. After the carpet has been relaid, if the colour is somewhat dingy or faded, it may be treated as follows: Procure from the butcher $\frac{1}{2}$ pint of fresh ox-gall, and add to three times its bulk of warm water ($1\frac{1}{2}$ pints). Wring a leather out of this, and wash about a yard of carpet (any very dirty places may be scrubbed); dip another cloth or leather in cold water, wring it out, and rub over the cleaned part; then rub with a dry cloth, making it as dry as possible;

then move on, and treat the surrounding portion in the same way till the whole carpet is cleansed.

OXGALL is usually sold from 2*d.* to 4*d.* per $\frac{1}{4}$ pint, each gall containing about this quantity. If stale, the smell is most objectionable. To aid the drying, and to get rid of the smell, the door and window should be open or a fire lighted. The alkaloid in the oxgall, combining with the dirt and grease in the carpet, forms an emulsion which enables the dirt to be removed easily ; but the gall also brightens the colour, contrary to the action of any other alkali.

Carpet soap is also very efficacious ; directions for its use are to be found on the tablets.

WEEKLY CLEANING. When the room is prepared for the sweeping, a strip of the carpet should be sprinkled with clean tea-leaves. If the carpet covers the whole floor, it is wise to use a small hand carpet-whisk to get into the corners, and a long-handled carpet-whisk for the rest of the room. If it is a pile carpet, brush the way of the pile, in the direction in which the widths are joined. Unless the pile lies in an opposite direction, it is always well to brush towards the fireplace. Brush each portion six or seven times, until no (or very little) dust rises, and when one strip is finished, scatter tea-leaves on and begin to sweep the next, taking care that the brushing overlaps, and that no dust is allowed to escape between the widths. Brush quietly, without raising the brush more than is necessary, as this makes the dust fly about the room. When all is swept, collect the flue and dust in a dustpan and burn immediately. When the dust in the air has been allowed to settle, take a bowl of lukewarm water containing a little dissolved borax and a few drops of vinegar, wring a leather out of this (preferably leather, as hairs from flannel are apt to adhere), and wipe the surface of the carpet all over. This makes it look fresh and clean.

TEA-LEAVES should be well washed in cold water to prevent their staining the carpet. If they are suspected of having come into contact with any trace of grease, wash them thoroughly in hot water before using cold. They should be taken into the room in a colander, or draining-basket, with a plate underneath ; as, if used too wet, they may make marks.

In Australia freshly cut grass is used, and in America tiny strips of newspaper are moistened to prevent the dust from rising.

While sweeping, it is well to close both doors and windows, as any draught may disperse the dust.

DAILY CLEANING. In rooms which are little used, many people simply pick up any bits which may be seen on the carpet, in the belief that this is less injurious to the carpet than daily brushing. The short-handled whisk should be used very lightly and gently, to avoid creating more dust than is necessary; the dust being collected in a dustpan and burnt immediately.

TO REMOVE CANDLE GREASE. Carefully scrape it off with a spoon, as a knife would be apt to cut the fibres of the carpet. Take a piece of blotting-paper folded double, place it over the part, then iron lightly with the point of a hot flat-iron. Move the paper quickly and repeat the ironing, using a clean piece of paper, until the result is satisfactory. The iron dissolves the grease, and the paper at once absorbs it.

OIL STAINS ON CARPET. For these make a paste by mixing fuller's earth and boiling water; place it on the carpet, leave it on 24 hours, or longer, taking care not to walk on the part; then brush it off with a hard whisk. This is usually most successful; but a little powdered magnesia added to the fuller's earth is, by many people, considered more effectual. Another method is to scrape a little French chalk, and place it dry on the part, brushing it off in a day or two.

Oil may be removed by rubbing with a cloth dipped in chloroform or any pure alcohol; but there is usually difficulty in obtaining this. Petrol (1s. per gallon) is also very efficacious.

WET INK. This should be soaked up at once with blotting-paper to prevent it sinking into the carpet. Saturate the part with milk (preferably skim milk, as rich creamy milk would be apt to leave a greasy mark); wipe it off as soon as discoloured, and rub with clean milk until the stain has gone, then wash with tepid water, and rub well. If the milk has been boiled and allowed to cool a little, it is more effectual; but if used too hot, it may make the colours in the carpet run.

STAIR CARPETS. These should always be from a half to three-quarters of a yard too long for each flight, to allow of the

carpet being moved three or four times a year, so that the tread does not always fall on the same place. They last much longer if pieces of felt are first nailed to the edge of the steps, or if stair-pads, which are made for the purpose (4*d.* or 6*d.* each), are used ; their use also deadens the sound.

UNDERLAYS add very much to the softness and noiselessness of carpets ; they also protect them from the inequality of the boards forming the floor, and from damp, as well as making them warmer for the feet.

Old carpets, if thoroughly clean, answer this purpose ; if these are not available, a wide coarse felt, costing 10*d.* a yard, is admirable. Where this is considered too costly, thick brown paper 54 inches wide and costing 2*d.* per yard, may be utilized.

NEW CARPETS require to be well laid. One end is usually nailed down first with brass carpet-tacks (2½*d.* per dozen) ; then the carpet is stretched down with a stretcher, a toothed instrument which, however, does not injure the carpet.

The cost of measuring, making, and laying carpets, including binding, nails, etc., is on the average about 4*d.* per yard ; for stair-carpets, 1*d.* or 2*d.* per yard.

HOW TO CALCULATE REQUIRED AMOUNT OF CARPET

Room, 12 feet wide by 15 feet long.

Reduce the 12 feet to yards = 4 yards.

Reduce width of carpet (27 inches) to yards = ¾ yard.

Reduce length of room (15 feet) to yards = 5 yards.

Then divide width of room by the width of carpet to ascertain how many widths are necessary, and multiply by the necessary length each width must be. Thus—

$$\frac{4 \times 4 \times 5}{3} = \frac{80}{3} \text{ or } 26\frac{2}{3} \text{ yards,}$$

or, speaking roughly, 27 yards.

If 4/- per yard, it will cost £5 8*s.* for the carpet, and 9/- for the making.

TO REMOVE SOOT FROM CARPETS, sprinkle the part with dry salt, mix it carefully and lightly with the soot, and take up with a soft brush ; then brush up briskly with a hard brush, and rub with a cloth dipped in water containing a little ammonia.

USES AND ABUSES OF CARPET-SWEEPERS

ADVANTAGES. Carpet-sweepers are useful for : (1) Taking up crumbs which may have fallen on the floor during a meal. (2) For the daily work of a room which is thoroughly brushed once a week. They raise no dust, and in that way economize time, as a room can be dusted more quickly after their use than after brushing. (3) They are especially useful for drawing-rooms and libraries, and with proper care will last many years.

DISADVANTAGES. A carpet-sweeper is not intended to supplant a brush, and must not be relied upon for thorough work, as it is not (1) possible with its aid to clean corners, or to approach the skirting-boards very closely ; they only remove surface dust. (2) They are liable to wear off the nap very rapidly, and when out of order require to be mended at once, or they may injure the carpet.

CAUTION. After use they should be carefully emptied, or the dust and flue from the preceding day will fall about the carpet. When dirty they should be cleaned at once, or the brushes will soil instead of cleaning the carpets.

PRICE. They vary in price from about 7/6 to 21/-.

CARE. They should be carefully hung up by the handle, the sweeper not being allowed to rest on the ground. When the brush portion is worn out it may be replaced at a cost of 2/6. The Bissel sweeper, in a convenient size, costs 13/6 ; the same size in the Ewbank sweeper is 9/11 ; both are found to be satisfactory.

VACUUM CARPET CLEANERS. Of these there are several reliable makes, which are found to be easily worked and very satisfactory.

HOME-MADE CARPET SOAP. $\frac{1}{2}$ oz. finely cut-up soap, $\frac{1}{2}$ pint boiling water, 1 tablespoonful of ammonia, and a small lump of soda. The carpet should be brushed with a nail-brush or soft scrubbing-brush dipped in this mixture, then well rinsed with a cloth wrung out of warm water, and dried with a clean dry cloth.

WELL-KNOWN VARIETIES OF RUGS. Sheepskin (any colour), 25/- to 60/- ; Angora (longer and silkier), 70/- ; hand-tufted Axminster, 35/- ; Mirzapore, 18/- ; Koula (coarser than

Mirzapore), 10/- to 40/- ; Namaz, or all wool Koula, from 40/- upwards ; mohair (any colour), 18/- to 25/-.

MATTINGS. Indian or Chinese mattings are by some people preferred to carpets for bedroom use, because they can be cleaned with a damp cloth without absorbing the moisture ; they are clean and cool, and a few rugs look well. They usually cost about 2/- per yard, and are about 1 yard wide.

MANILLA matting, which is made from the fibres of the plantain, will take most dyes, and therefore can be very effectively patterned ; it is not, however, very durable.

COCOANUT matting does not absorb moisture or collect dust, and is therefore useful for damp floors. It can be scrubbed and well rinsed, and for that reason is often used for kitchens. Red and black are often introduced, forming a bright-looking check or stripe. This makes a good tough covering for school-rooms, or anywhere where there is much hard wear. It is made in two widths, 1 yard and 2 yards, and costs from 1/- to 2/6 per yard. It must be taken up frequently, as the dust collects under it. Choose that in which the colour resembles the cocoanut shell : pale mattings are often manufactured of inferior fibres. It must be remembered that this matting is heavy and therefore not easily taken up ; also that its rough interstices readily hold dust, and that if made wet it dries very slowly, and is apt to cause a close heavy smell if the room covered with it is not kept well ventilated.

STRAW MATTINGS should be fixed in position, or they crack or wrinkle up. They must be dusted regularly, and washed occasionally with salt and water ; the salt prevents them from becoming yellow. They should only be made wet enough to enable the dirt to be rubbed off.

Bran water is often used for straw matting on account of its cleansing properties. The proportions are 2 handful of bran to 1 gallon cold water. Allow it to boil 20 minutes, then strain, wash with a flannel dipped in this mixture, and dry at once with a linen cloth.

PARQUETRY made in small panels of wood, permanently fixed to the floor, costs 3/11 per square yard ; but the roll parquetry, which is mounted on canvas, and can therefore be removed in the event of a tenant leaving a house, is 4/11.

These simply require sweeping and diligent polishing to keep them in good condition.

LINOLEUM. This useful and healthy floor-covering is manufactured of powdered cork and linseed oil. It should be bought from a reliable salesman to ensure it being thoroughly well-seasoned, and thus much more durable. It may be bought of a plain brown or green colour at 2/9 per yard ; this, with the rugs, looks very well, though when new it shows every mark.

INLAID linoleums, where the pattern goes right through the material (and is not simply printed on the surface), will be perfect to the very last. They are more costly, being about 4/- per yard, but are artistic and serviceable.

TO CLEAN OILCLOTH AND PATTERNED LINOLEUM

1. Sweep with a hair broom to remove all dust.
2. Wash a portion with warm water and a little soap, using a house-flannel.
3. Rub this part dry with a dry flannel at once.
4. Polish with a cloth dipped in milk.

After finishing one part go on to the next, as by finishing a part at a time kneeling on the wet floor is avoided. Occasionally, these floor-coverings may be rubbed with a cloth dipped in paraffin ; a through draught is then necessary to remove the smell.

CORK CARPETING, costing 2/9 to 3/- per yard, should be treated in the same way ; but as it has not a high polish, milk is sufficient for a final rub. It is usually pasted on to the floor.

PLAIN LINOLEUM has no pattern to suffer effacement ; but the use of a scrubbing-brush would in time break up and fret the surface. It is washed in the same way as the oilcloth mentioned above ; but a little soda can be used in the water occasionally if the floor is very dirty. Beeswax and turpentine, or wax floor-polish, gives a good gloss, but causes it to be slippery.

All these floor-coverings should be washed as seldom as possible, seeing that damp causes them to wear out ; they must always be dried very thoroughly. Rubbing with a dry flannel will often remove all marks.

KAMPTULICON is composed principally of gutta-percha. It wears well and is soft and warm, but every spot and footmark show. It requires to be washed in two or three waters and then well rubbed.

CHAPTER XIII

WALL-PAPERS

Choice—To detect Arsenic—Stripping Walls—Paperhanging—Paste—Cleaning Varnished and Unvarnished Papers—Whitewash—Distempering—Smell of New Paint.

By those who are furnishing anew, the paper of a room and the paint should be decided upon before the carpet and curtains, etc., are chosen. By those who already possess these items, the paper and paint should be so selected that they will not render shabby by contrast the half-worn things.

CHOICE. In the choice of papers various points should be borne in mind.

1. Dark papers tend to darken rooms and make them appear smaller.

2. The pattern should be suitable to the dimensions of the room for which it is required, and should form a suitable and appropriate background to the furniture and pictures.

3. Colours should be chosen which are unlikely to fade.

4. Rooms with a north aspect should have warm sunny tints, not grey or blue.

5. Sanitary papers should be chosen for hall, lavatory, bathroom, staircase, and kitchens, as when varnished they can be washed, and, being smooth, they do not so readily retain dust.

6. Bedroom papers should be pretty, unobtrusive, and bright; a light ground and small pattern being advisable. Avoid any design which suggests counting and grouping.

7. Avoid rough, uneven surfaces, such as flock papers: they not only retain dust, but actually create it.

8. Avoid any paper, however charming, which contains arsenic; as severe headache, and inflammation of the skin, eyes, and internal organs are often the outcome of its use.

TO DETECT ARSENIC. Light a piece of the suspected paper ; if it smells of garlic, arsenic is present. Or, as a further test, pour a little diluted hydrochloric acid on the paper ; if it becomes blue, arsenic is undoubtedly used in its colouring. Nowadays, however, arsenic is rarely used.

VARIETIES OF WALL-PAPER IN GENERAL USE

PLAIN-TINTED LINING paper, any colour, 1/- per piece.

SILK FIBRE, usually self-coloured, 2/6 per piece.

INGRAIN, plain or self-patterned, 2/- to 2/6. Ingrain papers have superseded the old-fashioned "flock" papers, which attracted dust, the flock itself, too, falling and making dust. This spring there is, however, an attempt at a revival of the flock variety in a good quality, costing 21s. per piece.

SATINETTE or **SATIN STRIPE**, 2/6 per piece.

SANITARY or **WASHABLE**, 2/6 per piece.

VARNISHED. These may be bought already varnished in the piece, or may be varnished after being hung ; the latter being the better method, as in this way the joins are more thoroughly coated. Varnished papers, which are washed in the same way as varnished paint (see Chapter XIV.), are advisable for kitchens, bathrooms, etc. Designs naturally vary very much, and the papers range from the machine-made at 3d. per piece to the hand-made at 10/6 and more. Very pretty bedroom papers may be had from 9d. upwards.

Ceiling papers are now largely used, and may be had at very low prices ; Linerusta and Anaglypta, which give a handsome appearance either as coverings for the ceiling or as a dado, are somewhat costly. Indian, Chinese, and Manilla mattings are also sometimes used to form a dado. (For cleaning, see Chapter XII.)

HOW TO CALCULATE NECESSARY AMOUNT OF PAPER

Find the square measure of the walls by adding together the length and breadth of room, double it, and then multiply by the height, thus:—

Room 15 ft. \times 12 ft., 10 ft. high.

$15 + 12 = 27$ ft., $27 \times 2 = 54 \times 10 =$ square measure.

Find square measure of the paper, which is 12 yds. long and

1 $\frac{3}{4}$ ft. wide, and then divide square measure of the room by the square measure of the wall-paper—

$$\frac{2 \times \overset{3}{\cancel{27}} \times 10 \times \cancel{4}}{\underset{9}{\cancel{36}}} \div \frac{60}{7} = 8\frac{5}{7} \text{ pieces.}$$

In which case it would be necessary to buy 9 pieces. If the pattern were very large, another piece might be required to allow for the waste involved by the matching of the pattern.

Wall-papers may be bought at greatly reduced prices during the months of December and January, before the new season's designs come in.

STRIPPING WALLS. It should be remembered that paper harbours dust, dirt, infection, and occasionally insects. This fact renders it essential, for the preservation of health, that all old papers should be stripped off the walls before a new one is put on ; thorough soaking renders this easier. Where varnished papers have to be removed a solution of strong soda and water is helpful, but the walls should afterwards be washed with vinegar and water to counteract this alkali, as otherwise the new paper may become stained and discoloured. All holes should be filled up with plaster of Paris, and the walls well rubbed with sand-paper to make them quite smooth before the papering is commenced. If new paint is desirable this should also be applied at this stage.

PAPERHANGING. This is not a long operation unless the pattern presents difficulties. The pieces are 12 yards long and 21 inches wide ; so that it is not difficult to calculate how many will be required. On each side of the roll a margin is left of plain paper ; this should be removed, and the paper cut into the required lengths. Then brush thoroughly with the paste ; double the length in half with the paste side inwards, and place it on the wall, beginning at the top, and working it downwards with a hair broom or duster from side to side, avoiding creases and wrinkles.

PASTE. Mix 2 lbs. of flour with cold water to the thickness of cream ; cook it over the fire till the flour-cells burst and it becomes clear ; add 3 oz. of powdered alum, which keeps it good and prevents the paste from becoming lumpy on the

paper. Decomposing paste is not only obnoxious, but exceedingly hurtful: the addition of a little oil of cloves is recommended to prevent smell.

VARNISHED PAPERS are cleaned in the same way as varnished paint. See Chapter XIV.

TO CLEAN UNVARNISHED PAPER. 1. A large clean duster should be tied over the head of a long-handled hair broom, and the walls swept all over from the top downwards, taking a clean duster as often as necessary.

2. Mix and knead flour and water to a stiff dough.

3. Rub the paper downwards in sections with the dough, taking a fresh piece as soon as it becomes soiled. Care must be used not to rub hard or horizontally.

LIMEWASH. This is prepared by mixing white quicklime in a bucket with hot water and some size. If a little carbolic acid be added, the disinfectant properties are increased, and it forms a very healthy wall-covering. Care must be taken not to let it splash into the eyes, as it might destroy the sight. In case of accident the eyes should immediately be bathed with vinegar and water; the acid neutralizing the lime. Medical aid is, of course, necessary.

DISTEMPERING WALLS. This preparation is similar to whitewash, only more size and colouring matter are added. Approximate quantities required for a small room $10\frac{1}{2}$ ft. \times $7\frac{1}{2}$ ft., 9 ft. high are: 6 lbs. whiting (14 lbs. for 6d.); 2 lbs. venetian red (2d. per lb.); 10 tablespoonsful of powdered size.

SMELL OF NEW PAINT. This is in any case objectionable, and to some people causes intense suffering in the form of nausea, vomiting, and colic. One of the best remedies is to place one or two pails of water, each containing a handful of hay, in the room.

WHITEWASH. Walls may be rendered clean and white by the application of whiting, which can be purchased at the rate of 14 lbs. for 6d. A little should be put in a clean bucket, and some powdered size added (8d. per lb.), as this keeps the wash on the walls from adhering to the garments of any one coming into contact with them. Pour on boiling water till the mixture is of the consistency of raw cream, and in order to make it a true white, without tendency to a yellow tint, add a little laundry blue.

By the addition of more blue the walls can be rendered blue instead of white, if preferred. A pretty tint of salmon pink, or pale terra-cotta, may be obtained by mixing venetian red (which is a powder costing 2*d.* per lb.) with the whiting.

Whiting is easier and safer to apply than lime, which, however, is preferable for disinfecting purposes and for use in cellars and larders.

Before the walls are whitened they should be thoroughly washed with clean water to remove dust, loose dirt, and the old coating of whiting.

For applying lime or whiting a special kind of brush is necessary, costing from 1/- to 3/6, according to size and quality. Where it is not likely to be in frequent use, one about 1/9 will suffice.



Ceilings, if not papered, are usually treated with whitewash, taking care that it is applied evenly, and not too thickly.

PAINTED WALLS

The advantages of paint as a wall-covering are that it can be washed easily, and does not attract dust or harbour germs. On the other hand, it is somewhat costly, three coats being necessary to produce the desired effect ; and it cannot be applied satisfactorily to walls with irregularities and cracks.

DURESCO is a cheap water paint which may be obtained in any colour and easily applied.

CALCIMO is also inexpensive, and contains a disinfecting ingredient.

PICTURE-RAILS

Picture-rail mouldings are now in general use, having superseded the old brass rods. They are easily fixed by nailing to plugged walls, are very strong, and bear the heaviest pictures. Where a frieze is used, the picture-rail is placed between the filling and the frieze, and thus adds to the decorative effect. In plain wood the mouldings vary from 1½*d.* to 4½*d.* per foot ; if white enamelled, from 2*d.* to 8*d.* per foot. They may also be had in plain gilt, cream and gilt, or polished walnut. The hooks for hanging the pictures cost from 2*s.* to 3*s.* per dozen.

CHAPTER XIV

Wood

How to scrub Floors, Tables, Culinary Utensils—How to treat Neglected Boards—How to Stain Wood—How to Polish—Recipes for Furniture Cream—Treatment of Old Oak—How to wash Varnished and Unvarnished Paint, Cane-bottomed Chairs, White and Brown Wicker Chairs.

HOW TO SCRUB WOOD. Some one has said that "scrubbing is a lost art," but we deny that statement most emphatically; and yet in order that wood may be a good colour, careful attention to various points is necessary.

1. Too many people scrub the dirt out of the wood, and then simply wipe it in again by use of a flannel wrung nearly dry out of the water, forgetting that it is most necessary to rinse off all the dirt before trying to dry the floor.

2. The use of dirty water cannot result in clean boards; the water should be changed frequently.

3. The wood must be scrubbed the way of the grain in order that the bristles of the brush may penetrate into every crevice and bring out the dirt. By brushing across the grain the bristles simply run *over* and not *into* the pores.

4. The use of soda discolours wood, making it dark.

5. The wood should be rubbed as dry as possible, and, in case of a floor, windows and door should be left open, so that the draught may dry it quickly. Wood in drying *slowly* is apt to become a bad colour. For this reason, if possible, a fine day should be chosen, especially if the room is to be occupied on the following night.

HOW TO SCRUB WOODEN FLOORS. The materials necessary are two pieces of house flannel, two pails of warm water, soap, kneeler, scrubbing-brush, and sand.

1. Remove all dust with a long-handled hair broom.

2. Kneel on a kneeler or piece of old carpet, dip one flannel in the water, and, commencing *as far from the door as possible*, wash the floor as widely as can be comfortably reached. Sprinkle this wet part with a little silver sand, rub soap on the scrubbing-brush, and scrub the way of the grain very thoroughly. Rinse out the flannel to get rid of the soap, and remove the dirt from the scrubbed part ; rinse it once again, the second time wringing the flannel out of the clean pail of water. Then wring the flannel tightly, and rub the clean part of the floor, thus drying it a little. Lastly, rub this part with the dry cloth to get it as dry as possible, and continue in this way until the whole floor is clean.

Cocoanut fibre kneelers can be bought at $\frac{2}{3}$ each, and last for a very long time ; woven rush ones, costing $\frac{1}{6}$ each, are not nearly so thick or durable.

Housemaid's knee would not be nearly so common if the use of a kneeler were insisted on.

Old garments can well be utilized for floor-cloths. House flannel suitable for the purpose costs $4\frac{1}{2}d.$ per yard ; the finer white house flannel costs $5\frac{1}{2}d.$ per yard.

Dry rot is caused by the growth of a fungus, the spores of which, floating about in the atmosphere, get into the crevices of the timber. Under favourable conditions these germinate and multiply, decomposing the wood and so obtaining their nutriment, until the whole floor is crumbling and unsound. All floors should be made of well-seasoned wood from which all the green sap has been extracted ; they should be well ventilated, as a warm, humid atmosphere conduces to dry rot. If a floor is attacked the affected part should be cut away, and its place filled up with pitch pine blocks, which are in short lengths ; the tar used in laying these prevents the fungi from spreading. Ventilation under the floor should also be obtained.

SOAP. Key or mottled soap is useful for scrubbing ; but carbolic soap is advisable for floors in the spring cleaning, and after any illness. Pastry-boards, bread-platters, and rolling-pins are all treated in this way, but very little soap is necessary for these ; thorough rinsing is essential. All wooden culinary utensils should, if possible, be dried in the open air, as this keeps them sweeter, and avoids any mustiness.

Meat chopping-blocks are often made of elm, and, being thick, are less liable to warp; they are dark in colour, and for this reason a little soda may be used if the wood is very greasy.

TO REMOVE GREASE-SPOTS FROM WOODEN FLOORS.

Boil one quart of soft water with $\frac{1}{4}$ lb. fuller's earth and $\frac{1}{2}$ lb. pearlash; while hot apply it to the spots, and allow it to remain ten or twelve hours; then scrub in the usual way. When grease is spilt on a wooden floor, pour cold water over it at once to harden the grease, and prevent it soaking into the wood.

GOOD PREPARATION FOR SCRUBBING NEGLECTED FLOORS. 1 lb. soft soap, 1 lb. fuller's earth, 1 lb. soda, 2 quarts of water, boiled down to half the quantity.

TO STAIN FLOORS. 2 ozs. potash crystals (permanganate, 2d. per oz. or $\frac{1}{8}$ per lb.) added to one pint of boiling water. This must be applied to the floor the way of the grain, very evenly, avoiding spilling, or making any spots. A pad should be used, made of flannel tied to a stick for a handle, as the mixture is so strong that it would destroy any sort of brush. Care should be taken not to allow any of it to come in contact with the hands, the stain being difficult to remove. When dry, give another coating until the requisite shade is obtained. After twenty-four hours, rub with a linen rag dipped in linseed oil; this brings out the grain of the wood, and gives a richer appearance.

Leave for twenty-four hours, then polish with beeswax and turpentine.

This may be relied upon to produce excellent results in floors, surrounds, deal tables, cupboards, etc.

TO PREPARE BEESWAX AND TURPENTINE. Shred some beeswax finely (2d. per oz. or 2/- per lb.) into an earthenware jar, cover it with turpentine, place near a gentle heat, and leave till dissolved, then add more turpentine if necessary. It should be of the consistency of thick cream; if too thick it becomes sticky. If applied with a pad of cloth or linen, it produces very satisfactory results on floors and furniture, although rubbing is required.

RECIPE FOR LIQUID POLISH.¹ $\frac{1}{2}$ pint turpentine (8*d.* per pint, 4/- per gallon) $\frac{1}{4}$ pint methylated spirit (6*d.* per pint, 3/- per gallon), $\frac{1}{2}$ pint linseed oil (5*d.* per pint, 2/6 per gallon), $\frac{1}{4}$ pint vinegar (2*d.* per pint).

Put these ingredients into a bottle and shake well, always forming an emulsion before use. This is an excellent recipe, and is especially successful for dark wood, such as mahogany.

The methylated spirit gives the wood a gloss, the turpentine and vinegar remove grease and prevent smearing, while the oil keeps the wood in good condition. Frequent use of this preparation prevents wood from becoming worm-eaten.

FURNITURE CREAM. 1 oz. white wax (3*d.* per oz.); 1 oz. beeswax (2*d.* per oz., or 2/- per lb.); 1 oz. of castile soap ($\frac{1}{2}$ *d.* per oz.); $\frac{1}{4}$ pint turpentine; $\frac{3}{4}$ pint boiling water.

The soap and two kinds of wax should be shred into thin slices, covered with the turpentine, and left for twenty-four hours. It should then be well beaten and the boiling water added gradually, beating well between each addition, until there are no lumps, and the mixture is of the consistence, colour, and smoothness of cream. It should be at once bottled.

CLEANING FURNITURE. Before applying any variety of polish the furniture must be quite free from dust, grease, and finger-marks. Cushions must be carefully beaten and brushed, especially the depressions surrounding the buttons. Any carved parts should be brushed and well dusted. In rush-seated, wooden-frame chairs, first brush the way the rushes run, always from the centre, and then well dust. Any serge or tapestry cushions may be cleaned very satisfactorily by thoroughly rubbing with hot bran followed by energetic brushing.

FINGER-MARKS. There are three usual ways of washing furniture to remove greasy marks :—

1. Melt a piece of soda the size of a walnut in boiling water, adding to it one quart of cold soft water. Wash the furniture with flannel dipped in this, rub dry with a soft linen cloth, and polish next day as usual.

2. Wash with flannel wrung out of cold tea.

¹ This recipe is taken from Newsholme & Scott's "Domestic Economy," by kind permission of Mrs. Pillow.

3. Wash with water coloured with vinegar ; this last is very efficacious.

If the furniture has been much neglected, it is advisable to rub it all over with linseed oil and allow it to remain for several hours. This loosens the dirt and prepares the wood to receive the polish. Any part which is scratched, or defaced, should be rubbed overnight with camphorated oil (2*d.* per oz.), as this helps to restore the surface. Slight stains can be removed by gentle rubbing with salt. If any white marks appear on a table, through overheated dishes being placed on the wood, they should be rubbed with a flannel dipped in spirit of camphor. Darker stains may sometimes be got rid of by rubbing with a cork, dipped in oxalic acid (1*d.* per oz. or 8*d.* per lb.) and water ; wash the place, dry at once, and polish in the ordinary way.

HOW TO APPLY ANY SORT OF FURNITURE POLISH

1. After removing all dust and finger-marks, shake the bottle of polish, and put a little on a flannel or soft old linen pad, and rub this well on the furniture.

2. Polish with two soft dusters, one in each hand to prevent the left hand marking the wood.

3. The final polishing must be the way of the grain of the wood, and should be continued till the hand, placed lightly on the wood, leaves no mark. Too much polish makes things messy and greasy, and is apt to become caked in the crevices ; it should not be put on in daubs and smears, but evenly ; rubbing is the chief means of getting a good gloss. The cork of the polish bottle should be replaced immediately after use.

TO CLEAN OLD OAK. Avoid the use of soap, soda, or hot water, as it deadens the appearance. Two or three times a year, after careful dusting, a very little linseed oil should be rubbed in and the wood well polished ; excess of oil causes the dust to stick.

A very successful treatment is the following : Wash the furniture with warm beer to remove every particle of grease, using a soft brush for the crevices. Boil two quarts of beer with 1 oz. of beeswax and 1 oz. of coarse moist

sugar ; when this is quite dissolved, apply it to the oak with a large soft brush, and when quite dry rub the surface till bright. For this purpose fresh beer is not necessary ; any left in glasses may be put into a stone bottle, and kept well corked.

TO RENDER OAK PANELS PRACTICALLY INCOMBUSTIBLE. Brush them over two or three times with a strong solution of silicate of soda.

HOW TO WASH VARNISHED PAINT. 1. Dissolve two tablespoonsful of powdered borax in a little boiling water.

2. Add this to three pints of cold water.

3. Dust the paint thoroughly, using a small brush to get into all crevices.

4. Wash with the borax and water, using a sponge.

5. Dry with a soft linen cloth or a leather.

6. Polish with furniture cream.

A sponge is preferable to flannel because it has no particles of hair to stick to the varnish. Cold water is used because it has no tendency to melt the varnish as warmth would do. The use of the leather prevents smearing ; also there is no danger of fluff adhering.

UNVARNISHED PAINT. 1. Dissolve as above a little borax.

2. Put it in a bowl of lukewarm water, adding a little soap jelly.

3. With a sponge or flannel gently wash the well-dusted paint.

4. Rinse with lukewarm water.

5. Dry with a soft cloth.

Old merino vests, woven jerseys, old flannel petticoats, even old light-coloured socks or stockings, are most useful for washing unvarnished paint. If cold water were used for rinsing unvarnished paint it would make the soap harden on the door, thus leaving it sticky. Only wash a small portion at once, and dry it immediately, as, if any water is allowed to trickle down, it makes marks ; the flannel should be wrung out and not be wet enough to drip. If washing a large surface, such as a door, the method of commencing at the lower part and working upwards is usually recommended. For paint, always avoid the use of soda, *hot* water, scrubbing, and hard rubbing.

When washing skirting-boards or painted mantelpieces, a sheet of wood or millboard should be held close to the part to prevent the moistening of the adjoining paper.

If doors creak, rub the tip of a lead pencil on the hinge, or apply a little oil to the same place with a quill feather.

Outside doors, if dusty, may be rubbed over with a cloth dipped in paraffin to remove dirt, freshen the colours, and prevent the paint blistering in the hot sunshine.

CANE-BOTTOMED CHAIRS. 1. Brush well to remove as much dust as possible.

2. Scrub gently on the under side of the cane with a nail-brush, using warm water and salt. This latter helps to prevent the discolouring of the cane. Do not use soap unless the chairs are very dirty, as it causes the cane to become yellow.

3. Wipe with a cloth, and place in the open air to become thoroughly dry. The wooden frame is treated in the same way as other furniture.

AMERICAN LEATHER UPHOLSTERY. Chairs covered with this material may be easily cleaned by first washing off any dirt with a little warm water and soap, using a flannel, then rubbing it with a cloth dipped in clean water. A glossy surface is retained by rubbing the material with a little white of egg, and, when nearly dry, polishing with a soft cloth.

The leather on writing-tables may be freshened in this way with the white of an egg.

BROWN WICKER CHAIRS. 1. Brush the cushions, and, if removable, brush them out-of-doors, paying special attention to the depressions round the buttons.

2. Brush and dust the chair, rubbing it with a little paraffin, and using an old nail-brush to get into the crevices.

3. Place it out-of-doors to remove the smell.

WHITE WICKER CHAIRS. Begin as above, then wash the chair with warm water in which is a little melted soap and salt (using as little water as possible), rinse well with cold water, which hardens the wicker, and wipe with a clean dry cloth. Dry out-of-doors, as this whitens the wicker. If a chair is dried near a hot fire, it creaks very much afterwards. If it is impossible to put the chair in the open air, put it in a thorough

draught to expedite the drying. To whiten the wicker, use a weak solution of oxalic acid and water (one dessertspoonful to a quarter pint of water), or a little lemon juice.

VARIETIES OF MATERIALS USED IN UPHOLSTERY.

			Inches wide.	s.	d.
TAPESTRY	{ Cotton Tapestry	...	50	...	1 6
	{ Wool „	...	54	...	5 11
	{ Silk „	...	52	...	9 11
VELVET	{ Utrecht Velvet	...	24	...	3 11
	{ Embossed „	...	24	...	3 11
	{ Genoa „	...	24	...	9 11
REPP	{ Wool Repp	...	54	...	4 11
	{ Fancy Carriage Repp	...	36	...	2 9
WOOL	{ Wool Damask...	...	52	...	3 9
	{ Moquette	...	27	...	3 11
LINEN	Printed Linen	...	36	...	2 6
COTTON	{ Cretonne	...	31	{ from 4 ³ d. to }	
	{ Chintz...	...	30	...	1 0
IMITATION	{ Rexine	48	...	3 11
	{ Embossed Pegamoid...	...	48	...	5 6
LEATHER	Crockett's or American Cloth	...	45	...	1 9
REAL	Morocco (small skins)	...	—	...	11 6
LEATHER	Roan (not very durable), per skin	—	6 4

CHAPTER XV

Iron-Ware

Choice, Care, Price, and Cleaning of Saucepans—Treatment of Enamelled Pans—Cleaning Galvanized Iron—How to clean Flat-irons—To remove Rust—Aluminium.

IRON is a well-known metal, whose value and uses were familiar to the people in the time of Moses. It is found in most of the countries in Europe ; large quantities being obtained in the British Isles. The Dean Forest mines, in Gloucestershire, are very ancient : they were first worked by the Romans.

Iron is prepared for use in three ways : (1) Forged or wrought ; (2) Cast ; (3) Steel.

In the first process the iron is made red hot, which causes it to become flexible and easily bent ; it is then beaten with heavy hammers into the required shapes. Articles made of wrought iron are much stronger than those made of cast iron.

In the second method the iron is melted to a liquid by intense heat, then poured into moulds of the required shape, and, when cold and set, the moulds are taken away.

The transformation of iron into steel will be spoken of in the chapter on Steel (XVI.).

SAUCEPANS

CHOICE. 1. The handles should be firmly fastened on.

2. The covers should fit tightly.

3. Iron saucepans should be made of wrought iron, lined with tin.

4. Enamelled saucepans should be made of wrought iron covered with enamel.

CARE. 1. They should never be left empty on a hot stove.

2. Never be put away damp, or they quickly become rusty.

3. Space for air must be left ; to ensure which they may either be placed on their sides, or with a part projecting beyond the shelf ; or the shelf may be made of strips of wood, not one solid piece. The air makes them wholesome, and prevents their becoming musty.

PRICE. The price varies, according to the size, from 1/6 to 4/6 ; large enamelled fish-kettles may be bought for 10/6 ; enamel-lined saucepans from 6½*d.* to 3/6 ; block tin fish-kettles for 5/6.

Iron saucepans lined with enamel are excellent for milky foods, as they do not burn so quickly as the ordinary enamelled pans.

CLEANING IRON PANS. 1. If used for anything greasy, they must be boiled with soda and water.

2. If used for starchy food, they should be steeped with cold water ; hot water makes starchy material adhere to the pan.

3. Scrape the soot from the bottom and sides of the pan with an old knife on a piece of paper. A sooty pan does not become hot nearly so quickly as a clean one.

4. Clean the inside of the pan with a brush well soaped, and then dipped into silver sand.

5. Rinse thoroughly, first under the hot-water tap, then under the cold. The hot water removes all soap and sand ; the cold takes away the smell of the soap.

6. Clean the outside in the same way, and dry with a cloth.

7. Allow the pan to stand upside down a few minutes on a warm stove, or on the rack, to become thoroughly dry before putting away.

For cleaning the covers, see Chapter XVIII.

CLEANING ENAMELLED PANS. 1. After steeping, the soot should be removed, and they should be washed with hot water.

2. Any burnt part, or stain, may be removed by rubbing with a rough flannel dipped in salt and crushed egg-shells. The salt takes off the stain, and the egg-shell slips under the burnt material, and enables it to be easily rubbed off.

3. Rinse well, and dry inside and outside with a cloth.

Care should be taken not to use enamelled saucepans when

the interior enamel is badly chipped, as some of the substances composing the lining are not wholesome.

FLAT-IRONS

CARE. Irons should be kept, if possible, in a dry place. If not to be used for some time, they should be slightly warmed, then rubbed over with tallow or cold mutton fat ; this makes a coating which excludes the air and so prevents rust. Before use again they must be warmed to melt the grease, then rubbed well on powdered bathbrick, scrubbed with Sapolio and water, and dried on a warm stove.

RUST may be removed by rubbing the irons with powdered bathbrick or emery-paper, sprinkled with a few drops of paraffin.

ENAMELLED HOT-WATER CANS. These when yellow inside (being discoloured by water) should be rubbed with a damp flannel dipped in dry salt, rinsed, and dried. In choosing this ware it should be remembered that the German is a few pence cheaper, and is enamelled on tin, while that of English manufacture is the more durable, because the foundation is of steel.

CARE OF GALVANIZED IRON, OR IRON COATED WITH ZINC TO PREVENT IT RUSTING SO READILY. Baths and buckets should be attended to regularly, as, if neglected, it requires much time and labour to restore the polish.

After use they should be always rinsed with hot water and soda. On washing day, before the soapy water in the copper is thrown away, it is a good plan to put the various pails in one at a time, and give them a good scrubbing, then dry, first with a cloth, and afterwards by placing them in front of the fire.

HOW TO CLEAN IT. 1. Scrub with brush, using hot water, soap, and soda.

2. Dry with a cloth.

3. Dip a piece of rough house-flannel, felt, or carpet, in paraffin, and then in brickdust or silver sand ; and rub till the article is bright and clean. Rinse in hot water, then in cold, and dry thoroughly.

4. Place in a draught, or, if fine, in open air, till the smell of the paraffin is removed.

PAN MIXTURE. The following is an old-fashioned recipe for cleaning iron saucepans, to be used for scouring after the pans have first been cleaned with hot water and soda : 1 lb. soft soap (2*d.*) ; 1 quart water ; 1 lb. sand ; 1 lb. whiting. These ingredients are to be boiled for one hour, stirring occasionally.

ALUMINIUM. Those who advocate the use of aluminium saucepans claim for them the following advantages :—

1. That they are unbreakable.
2. That they are light in weight and easily kept clean.
3. That there is no poisonous ingredient in their composition.
4. That they do not retain heat when removed from the stove, and thus cannot impart a burnt flavour to any food which may be allowed to remain in them for a short time. The prices range from 1/5 to 6/11 for useful sizes.

Aluminium is an ore, white in colour with a blue tint, which takes a fairly high polish. It should be cleaned with a strong alkaline solution.

CHAPTER XVI

Steel

Information about Steel—Various Ways of Cleaning—Recipe for Steel Polish—Care and Cleaning of Knives—How to prevent and how to remove Rust.

STEEL is a refined kind of iron, formed by heating bars of iron with charcoal ashes covered with clay. It is raised to white heat, which renders it finer and whiter, and makes it capable of taking a high polish. After this it is "tempered," that is, while white hot it is plunged immediately into cold water, which makes the steel extremely hard and brittle, and yet preserves its flexibility.

CARE. Steel should be kept in good condition by being daily rubbed with a chamois leather, and perfectly secured from damp.

HOW TO PRESERVE FROM RUST. 1. Warm a little mutton suet and rub it all over the fire-irons and grate ; then dust them with unslaked lime tied up in muslin. Mutton fat is the best form of grease. Dripping or oil does not answer the purpose, the former probably containing some salt, and the latter so much water that it would not form a coating.

2. Rub the steel over with paste made of fresh lime and water, which will keep out the rust for many months.

TO REMOVE RUST. If the rust has been allowed to remain for any length of time on the steel its removal is a difficult matter, because the rust actually eats into the surface of the metal. Fine emery-paper, sprinkled with paraffin, is the easiest treatment ; but care must be taken to rub only one way, as otherwise a scratched appearance is the result.

FOR REGULAR WEEKLY CLEANING

METHODS OF CLEANING. 1. Scrape some bathbrick finely into a saucer.

2. Make it into a paste with equal parts of methylated spirit and water.

3. Rub this on with a flannel, and off with an old duster.

4. Polish with a leather.

5. Use a burnisher if convenient.

BURNISHERS can be purchased at the "6½d. shops," and give great brilliancy to any rounded parts (such as handles of fire-irons), where they can be rubbed up and down briskly.

CROCUS powder is admirable for steel. It is mixed with pure salad oil, and put on the metal overnight; next morning it should be rubbed off, and the steel cleaned with equal parts of crocus powder and crushed bathbrick.

A SIMPLE METHOD. Rub the steel with a flannel dipped in paraffin; then polish with a dry cloth dipped in bathbrick or emery powder.

RECIPE FOR POLISHING PASTE FOR STEEL. 2 ozs. rotten stone; 1 oz. fine brickdust; 2 ozs. soft soap; 1½ oz. turpentine.

Mix the dry ingredients well together, then work in the soft soap. After amalgamating these three, add the turpentine gradually; keep in a tin with a tightly fitting cover. Rub a little of this on the steel with a soft cloth, remove it with another cloth, then polish and burnish.

EMERY-PAPER is most useful for steel bars of grates. A rag dipped in fine ashes is a cheap and satisfactory polish for steel.

MANUFACTURE, CARE, WASHING AND CLEANING OF KNIVES

MANUFACTURE. Until the reign of Queen Elizabeth the best knives were all imported from abroad; but about that time the Sheffield cutlery was much improved. A table-knife in its manufacture passes through sixteen hands, in one hundred and forty-four stages of workmanship; but all the movements are so rapid that the knife is shaped in a few minutes; the

blades being made of "double shear" steel, the sharp part which penetrates into the handle, and which is called the "tang," being made of iron.

CARE. Good knives are invaluable in a house. A good bread-knife with a broad, sharp, well-shaped blade ; carvers that do their work easily, and sharp vegetable knives, are a daily saving of time and patience. To preserve the temper of a knife, it should be kept away from heat. After a knife has been used for anything acid, it should be cleaned at once, as the stain comes off then quite easily.

If knives are to be put away for some time, the blades should be rubbed with a few drops of sweet oil, and folded one by one (blade and handle alternately) in a piece of flannel, baize, or chamois leather, to keep off rust.

STEEL FORKS are shaped on an anvil ; the prongs being stamped out, tempered, and ground upon a dry stone. They are to be cleaned in the same manner as knives. Useful carvers may be bought from about 10/6 upwards. Good white-handled table-knives usually range from 17/- upwards per dozen. Black-handled kitchen knives and forks can be purchased from 9d. a pair.

WASHING OF KNIVES

1. If very greasy, rub first with a piece of paper and burn it.
2. Put the blades in a jug, and pour in water nearly up to the bolster, or joint between blade and handle, and shake in a little dry-soap powder.
3. Rub each blade and handle with a dishcloth, and dry at once. Hot water, if it touched the handles, would melt the resin, loosen the handles, and discolour white ones. The less a knife is in water, the longer it will last.

STAINED HANDLES. A little whiting moistened with lemon juice will remove recent stains from ivory handles.

TO FIX LOOSENED KNIFE-BLADES. Heat the tang and press it into the handle, previously filling the hole with the following mixture : resin, 4 parts ; beeswax, 1 part ; and plaster of Paris, 1 part.

CLEANING

1. If the blades are badly stained, rub them with a damp flannel and brickdust, and dry before polishing.

2. Scatter a little emery powder, or crushed bathbrick, on a knife-board, and clean both sides of the knife, holding it quite flat, being careful to clean the bolster, and remembering that to hold a knife sideways, or rub the edge, blunts it.

3. Dust with a rough knife-cloth, and then a clean cloth, to secure that every particle of the powder is removed. A piece of board covered with carpet is very useful for giving a brilliant polish, the knives being quickly rubbed over it.

The blades must be quite free from grease, or they will not take a high polish. The back of the blade must be attended to, and the knives must be placed in the box with all the handles the same way, to avoid accident.

Wire knife-trays with three divisions are useful for the dirty knives; they cost about 1/- each. Wooden boxes with divisions can be bought at the $6\frac{1}{2}d.$ shops, and form convenient receptacles for the clean ones. Medium-size boards cost about 1/-.

CHEAP METHOD OF CLEANING. Take two ordinary corks; damp one and dip it in powder or bathbrick, and rub it on the blades to remove stains, which it very quickly does. Use the remaining cork and dry powder to obtain a polish; then dust the blades and handles thoroughly.

ONION. To remove the smell of onions from a knife, it should be pushed once or twice into the earth.

EMERY paper is prepared from a hard, heavy ore, which comes from the Levant and the Isle of Naxos. The stone is ground very fine, and then sprinkled evenly on sheets of paper with an adhesive surface. Two sheets are usually sold for $1\frac{1}{2}d.$

CHAPTER XVII

Brass and Copper

Its Composition—Three Methods of Cleaning—Neglected Brass—Treatment of Lacquered Goods, and Benares Ware—Copper.

COMPOSITION. Brass is an alloy manufactured of tin, copper, zinc, and the calamine stone. The depth of colour depends on the proportions of tin, copper, and the stone. This mixture is melted, and then poured into sheets, which when cold are beaten into shape.

FIRST METHOD OF CLEANING. Scrape a little bath-brick to a powder, moisten it with paraffin oil or vinegar, and rub it thoroughly on the brass with a flannel. Rub it off with another piece of flannel, and polish with a soft duster. A final rubbing with a leather adds to the brilliancy.

SECOND METHOD. Wash the brass free from grease, and rub it well with a cloth, using Sapolio or Monkey Brand soap. Dry with an old cloth, and polish with a soft duster and powdered bathbrick.

This is the cleanest mode, as there is no oil to soil the surrounding woodwork ; but when polishing door-handles it is a good plan to slip a piece of millboard or thin wood with a hole over the handle, as this prevents the adjoining paint from being marked.

THIRD METHOD. Any of the various metal polishes may be used with great success. They are more expensive than the foregoing modes, but impart a beautiful and, some people consider, a more lasting polish. Directions for their use are always to be found on the tins.

NEGLECTED BRASS. Brass which has become quite black from neglect may speedily be restored to its pristine brightness

by the following treatment : Dissolve 1 oz. of oxalic acid in $\frac{1}{2}$ pint of boiling water ; add 1 tablespoonful of hydrochloric acid (spirit of salt), shake well and rub on plentifully with a flannel. Dry and polish with a dry flannel.

N.B.—As this is a strong poison, be very careful that the bottle is plainly marked.

LACQUERED BRASS. Lacquer is a kind of spirit varnish which must be treated carefully, as it quickly comes off. Lacquered brass may be washed gently with lukewarm soap lather, or rubbed gently with a cloth dipped in sour milk, or equal parts of vinegar and water, or with equal parts of lemon juice and water. But for some months new lacquer only requires polishing with a chamois leather. When once the lacquer is worn off, the brass must be cleaned regularly in the ordinary way ; this, of course, entails more time and labour.

BENARES WARE. This should be washed in warm soap lather and well dried, rubbed with half a lemon, rinsed quickly with boiling water to remove the acid, and lastly, thoroughly dried and polished with a leather.

Very much of the so-called Benares ware has a large amount of lead in its composition, which accounts for the very dark, almost black hue, which is sometimes seen after cleaning. For this there is no home treatment ; the ware must be sent away to be re-dipped in melted brass.

COPPER is a reddish-hued metal found in mines in different parts of the world ; the Burra Burra mine in South Australia probably being the most productive.

CLEANING. It is treated in exactly the same way as brass, and all the foregoing methods apply equally to it. For neglected copper, finely powdered emery may be used successfully with oxalic acid. Verdigris (the green substance often found on brass and copper, but more especially on the latter) can often be removed by the use of salt and vinegar—but thorough rinsing and careful cleaning are necessary after their use.

Leathers which have been used for brass or copper must never be used for silver, or anything connected with food, as metal polishes often contain poisonous ingredients.

PRECAUTION. Copper cooking utensils lined with tin must be carefully watched for any signs of the tin wearing away. If

these are detected the article should be sent to be re-tinned, as frequently cases of poisoning have been traced to neglect of this precaution.

RECIPE FOR BRASS POLISH

4 oz. soft soap, 1 oz. oxalic acid, sifted powdered bathbrick. Thoroughly dissolve the soap, add the acid which has been first dissolved in a little water, lastly stir in enough bathbrick to make the mixture the consistency of the ordinary brass polishes. Keep in air-tight tins.

N.B. Remember the oxalic acid is a most powerful poison.

CHAPTER XVIII

Silver and Plated Goods

Solid Silver—Composition of Silver Plate, Usual Patterns, Cleaning of Silver, Frosted, Silvered, Oxydised, Silver Braid—How to precipitate Whiting—Materials—Tin Solution—Cleaning of Tins—Britannia Metal—Pewter—Sheffield Plate.

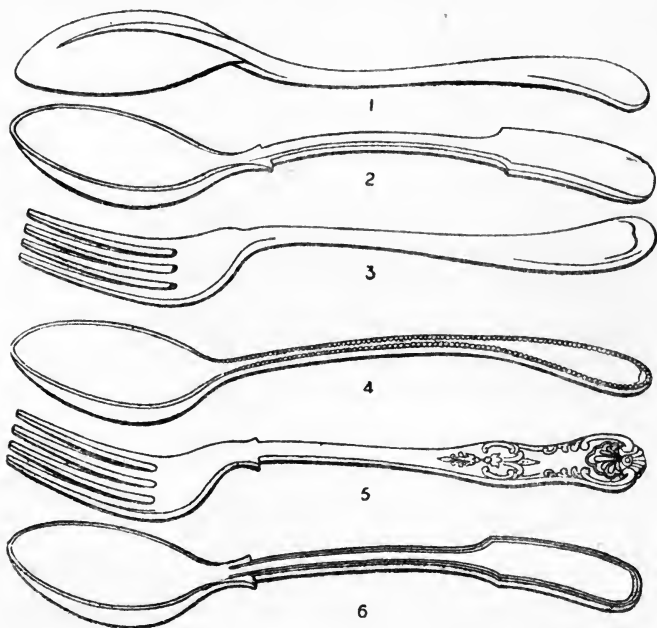
SOLID silver goods were plentiful in the sixteenth century ; but during the wars between the King and Parliament both sides gave up much in order that it might be melted down to provide food and clothes for the troops. During the last prosperous reigns silver spoons, forks, decanter stands, etc., have once more become usual.

All articles of real silver are hall-marked, and vary in price according to weight ; the price of silver varies, but it is generally somewhere about $5/6$ per oz., duty paid.

All silver must be amalgamated with some other metal to make it harder and less brittle. For this purpose copper is mostly employed. The recognized legal mixture is 11 ozs. 2 dwts. of silver to 18 dwts. of alloy : these are what are called the standard proportions.

ELECTRO. The various imitations of silver have been wonderfully improved during the nineteenth century. German silver was once much in request, but very soon turned yellow when in constant use. Plating at one time was frequently done on dark metals, with the result that when the plating wore off, or became thin, the effect was very unsightly. Now, plating is mostly done on hard white metal, which is extremely durable and wears very well. Table forks, guaranteed to last in good condition in daily use for fifteen years, can be purchased at 17/-

per dozen ; dessert spoons and forks at 12/9 per dozen ; tea-spoons at 9/11 per dozen. Of course there are many sold at lower prices ; but it is false economy to buy that which has only a very thin plating, as it soon wears off, and re-plating is expensive. There are several regulation patterns ; viz. :—



1. Rat's-tail, where the bowl of the spoon is strengthened by the continuation of the handle.

2. Fiddle.

3. Old English.

4. Beaded.

5. Glasgow, or Queen's.

6. Threaded, or Reeded.

APOSTLE SPOONS. Apostle spoons are much used at present ; the figures are mostly copies from the twelve figures

on one of the shrines at Nüremberg. In olden days they were usually presented by godparents to their godchildren, with the child's patron saint represented on the handle.

CRUETS. Central cruet stands are rarely used now, as they interfere with the decoration of a table. Small cruets, or pepperettes, salt cellars, and quaint mustard pots are placed at the corners ; or, if available, near each person. Very dainty plated ones can be purchased from 4/6 upwards.

SALT CELLARS. Electro-plated salt cellars soon become black or green if the salt is left in them. Unless there is a glass lining, the salt should be often removed, and the salt spoons should not be kept in them.

MUSTARD. Mustard spoons also ought to be removed after use, as, if kept in the mustard, they become very tarnished.

EGG spoons are quickly tarnished by the sulphur in the yolk of the egg. After washing they should be well rubbed with dry salt and washed again.

FISH AND DESSERT KNIVES AND FORKS. These should be washed in the same manner as ordinary knives and forks, taking care that the water does not come up to the bolster or joints of blade and handle.

BUTTER knives and jam spoons are more durable if made in one piece of plate, not with an ivory handle.

RICH cakes should not be left for long in silver cake baskets, as the grease soaks through the d'oyley and turns the metal green.

TANNIN—DAILY TREATMENT OF METAL TEAPOTS. To prevent silver teapots becoming stained, they should be emptied and well rinsed with boiling water immediately after use, and thoroughly dried inside and outside. Every fortnight the teapot should be filled with boiling water, to which a large piece of soda has been added, and should be allowed to stand all night. Next morning it should be emptied, and well washed and scrubbed on the inside with a small brush kept for the purpose.

When buying metal teapots, remember that those which possess a long slanting spout coming almost from the bottom of the pot are usually very bad pourers, it being almost impossible to avoid spilling.

CLEANING OF SILVER OR PLATE

CLEANING. Wash well with soap and water to remove all grease. Dry at once. Rub well with a paste of water (or methylated spirit occasionally) and precipitated whiting (using a piece of soft flannel) till quite clean.

When quite dry rub it off with a soft cloth, using a brush for any embossed parts, and being careful to get off all the whiting. Polish with a leather.

A wooden skewer, covered with the flannel, will be found most useful for cleaning between the prongs of the forks.

FROSTED SILVER. Wash in very hot, soapy water. Dry with a soft cloth in front of fire. Rub well with a leather. Unless very much discoloured, avoid the use of whiting, as it is apt to get into the tiny crevices, and requires time and patience to remove it. After its use the silver must be well brushed, again washed in soapy water, rinsed in very hot water, dried, and polished as usual.

OXIDISED SILVER. For cleaning this a solution of sulphate of soda is necessary. Dissolve 1 oz. in one pint of boiling water. Rub the silver with a flannel dipped in this, rinse in very hot water, dry at once, and polish with a leather.

SILVER CLEANING SOLUTION

- 2 ozs. precipitated whiting,
- $\frac{1}{2}$ oz. jeweller's rouge ($3\frac{1}{2}$ d. per oz.),
- 2 teaspoonsful of powdered ammonia (1d. per oz.),
- 2 tablespoonsful of methylated spirit,
- $\frac{1}{2}$ pint of water.

Mix the rouge, whiting, and ammonia together, put into a bottle, and add the water and spirit. Cork at once, and shake well before use.

TO RESTORE PLATED ARTICLES. Mix 2d. worth of mercury and $\frac{1}{2}$ d. of prepared chalk in a saucer with a little warm water, and with a small piece of leather rub the tarnished article until the polish is restored.

N.B.—Mercury, if used often, is apt to remove the plate.

SILVER LACE AND BRAID

SILVER LACE can be easily brightened by the application of a little dry, powdered magnesia, which is simply rubbed on and allowed to remain for a few hours, then brushed off with a clean, dry plate brush, or rubbed with a flannel dipped in spirits of wine.

MATERIALS

WHITING, when precipitated so as to avoid any danger of scratching through the presence of grit, is to be thoroughly recommended as being cheap, safe, and efficacious.

Many plate powders contain mercury, which is very injurious to any kind of electro-plate ; quicksilver causes silver to become brittle and easily broken.

ROUGE. Non-mercurial rouge is very good. Many pink powders are simply precipitated whiting, coloured with a little jewellers' rouge, which can easily be procured at 2*d.* an ounce.

DISCOLOURED silver may be readily restored by making a paste of hartshorn powder (1*d.* per oz.) and spirit of wine. This produces a good polish, which perhaps lasts longer than that produced by use of whiting. Ammonia is also a good agent for removing tarnish ; in fact, gin, or any kind of spirit, is effectual ; but methylated spirit is the cheapest form.

HARTSHORN. Formerly only prepared from the horns of the deer or hart, but now distilled from bones, is very similar to ammonia, which is prepared by burning together soot, bones, oil, and salt.

WHITING is simply chalk pounded into a rough powder.

TO PRECIPITATE WHITING. Tie some whiting loosely in fine muslin (old muslin castor sugar bags answer the purpose) ; fasten it to the handle of a jug, allowing the part of the muslin containing the whiting to be inside the jug ; pour over it cold water, taking care that it covers the whiting ; let it stand all night, or, if wanted for immediate use, keep moving the bag till all has passed through ; then pour off all the clear water. Let the sediment (which is the whiting) dry on plates on the rack or in a warm place. Keep in a box away from the dust.

TO PREPARE CLOTHS FOR RUBBING SILVER. Boil

for five minutes some soft old rags in 1 pint of new milk to which has been added 1 oz. of hartshorn powder ; wring out immediately, and dry before the fire, keeping the cloths with the cleaning materials for future use.

SILVER should always, after use, be washed in very hot soapy water ; a little ammonia helps to make it bright. After being rinsed in hot water it should be placed on a tray, taking care that it is put in such a way as to avoid scratching. It should be dried immediately ; as if allowed to remain wet for long water marks are often formed. After drying, it should be rubbed with a chamois leather, which should be kept in the baize-lined wicker plate basket. These baskets, costing about 4/6, contain divisions for the various articles, which should always be returned to their respective places. When the weekly silver cleaning takes place, the basket should be emptied, turned upside down and gently tapped, also brushed to remove any dust. The silver should all be counted to see that none is missing ; a written list may conveniently be kept fastened with drawing pins on the inside of the door of the butler's pantry.

TIN. Tin can be cleaned very satisfactorily, in the same way as silver, by using water and whiting made into a paste, then polishing it with dry whiting.

The following solution is the cleanest material for brightening tin :—

SOLUTION. $\frac{1}{4}$ lb. of yellow soap, 1 lb. best whiting, 1 quart soft water, and 2 ozs. spirit of hartshorn.

METHOD. Cut up the soap in thin slices, and pour on it the quart of cold water. Let it stand overnight till dissolved. Then add the whiting and bring it to boiling-point, stirring all the time. Allow it to become quite cold, then add the hartshorn. This will keep any length of time if put in a well-corked bottle. Before use the bottle should be well shaken, and a little of the contents poured into a basin.

TO CLEAN TINS

1. Wash free from grease with soda-water and soap.
2. Dry, then rub with a damp cloth dipped in either brick-dust, whiting, the above tin solution, or Brooke's soap.

3. Wipe with another cloth, then polish with a soft duster or old leather.

Metal polish should not be used even for the outside of cookery utensils, as it contains poisonous ingredients.

TO LABEL TINS. Tins should be washed with strong soda water to remove any grease, as this prevents labels from adhering. If using labels already gummed, either moisten the back of the gummed label with a drop of glycerine (instead of water), or rub the place on the tin where the label is to be affixed with a slice of onion. Either of these methods prevents the labels falling off when dry.

BRITANNIA METAL. This should be cleaned in the same way as tin, using the solution mentioned on the previous page.

PEWTER. This old-fashioned metal, which is a composition of lead and tin, has once more come to the fore. It is about seventy years since any was made in England. The nearest approach to it is antimony ware. It is a vexed question amongst collectors whether pewter should be cleaned or not; but cleaning certainly preserves it, and if it is to be placed on an old oak dresser the contrast of colour is much more effective after cleaning. For neglected pewter the best treatment is first with Brooke's soap and a little whiskey, then with soap and water, and lastly polishing with whiting. Obstinate stains or dirt may be removed by soaking the pewter a few hours in a bath of pickle composed of freshly slaked lime and soda.

When the metal is thoroughly clean, it should be kept in good condition by the method employed for cleaning tin.

SHEFFIELD PLATE. Mention must be made of this material, as it is now so highly prized, probably on account of its rarity. In 1742 the secret of its manufacture was discovered by Thomas Bolsover. It is formed of copper and silver, and yet is not an alloy; the body consisting of copper with a coating of silver. On a bar of copper was placed a thinner bar of silver, the two bound together were placed in a furnace, heated until on the point of fusion, and afterwards withdrawn. It was then found that, however thinly the material was rolled, the silver still formed an inseparable coating. In order to give the appearance of solid silver, both sides of the metal were treated in this way. At one time Sheffield Plate

was melted down for the silver and copper contained in it, but during the last ten or twelve years those who value quaint and rare antiquities have diligently collected it. Lady Wolseley has probably the largest collection in England. It is cleaned in the same way as ordinary plate.

CHAPTER XIX

Glass

Origin and Composition—Description of a Few Varieties in ordinary use—How to clean Water Bottles, Furred Decanters, Tumblers, Mirrors, Globes—Origin of Windows—How to clean Picture Glasses—Opaque Windows.

GLASS is a composition made by blending melted sand and certain alkalies, principally potash and soda. These ingredients are melted in a furnace for 50 or 60 hours, and then formed into the desired shape by moulding or blowing. After which they are toughened or annealed by cooling very gradually, to prevent the glass from breaking, 24 hours being necessary for small articles, and 36 hours for larger ones.

ORIGIN. It was discovered accidentally by some merchants in Syria who were shipwrecked, and who, finding a sufficiency of the plant Kali on the shore, used it to make a fire; the ashes of the plant, mixing with the sand, produced glass. This first glass was not transparent: the art of making it clear not being discovered until some centuries later. Ancient specimens have been found in old Egyptian tombs, some of which are now to be seen in the British Museum. Nero is said to have given £50,000 for two small cups of transparent glass. Many curious shapes are formed by blowing; the glass is then baked in order to retain its shape.

MOULDED GLASS. Pouring molten glass into steel moulds produces dishes, plates, jugs, etc., at a wonderfully low cost. The glass is taken from the mould before it is quite cold; it can be left as a plate, or be bent at the sides to form a deeper dish. This is the cheapest form; butter dishes, sugar basins, dishes for stewed fruit and sweets can be purchased for a few pence, and if kept clean and bright, the glass looks very well, especially in the form of a dish, as the smooth upper surface veils the roughness of the moulding.

CUT GLASS is expensive, every facet having to be cut separately on the surface of very clear thick glass. After the cutting, equal care is essential in the polishing.

In order to obtain the best effect the glass used must be of a highly refractive power : this in itself is costly.

The superiority of English glass is said to be owing to the introduction in its manufacture of red lead ; that made in Germany usually possesses a bluish shade.

Either moulded or cut glass must be well brushed to prevent any dirt from lodging in the indentations.

ENGRAVED glass. This process is only attempted on good material, as it is a somewhat lengthy and difficult process. A wax stencilling is placed on the glass, and the spaces forming the pattern are engraved by holding the glass over a wheel sending out a blast of sand, which thus eats into the unprotected parts.

ICED OR FROSTED glass is also expensive, and requires to be kept scrupulously clean to obtain its full beauty.

OBSCURED OR GROUND glass is obtained by holding plain clear glass over a rotatory sand wheel. It is apt to become discoloured.

ETCHED glass. This is a costly article ; the glass being protected with wax while the pattern is etched with a fine needle. A cheap German imitation is easily obtained ; the pattern is simply printed on with strong acid, which burns, or eats out the design.

TO MEND GLASS

Dissolve $\frac{1}{2}$ oz. of isinglass in a small wineglassful of spirits of wine, melting it by means of gentle heat. Paint the clean broken edges with this mixture, using a camel-hair brush. Dry in a cool place. White enamel carefully and sparingly applied to broken glass makes a very satisfactory joining.

WATER BOTTLES

1. Put a small handful of tea leaves, about a teacupful of vinegar and another of water, and a lump of salt the size of a walnut into the bottle : leave it one or two hours, shaking occasionally.

2. Rinse well in cold water two or three times.

3. Dry the outside with a cloth free from fluff, polish with a chamois leather, and put in a bottle rack, or neck downwards in a jug, to drain. This method ensures great brilliancy.

DECANTERS, if not badly stained, should be treated in the same way; the salt and vinegar being especially effectual with port stains. The stopper must never be replaced until the decanter is quite dry.

OTHER METHODS. Mix crushed eggshells with salt and warm water, or use chips of raw potato, or bits of brown paper well soaped and rolled up. These are to be well shaken, using warm water; then well rinsed in cold water. A little silver sand helps to brighten glass, but requires much rinsing to get rid of.

Small shot is useful for removing wine stains, but has a tendency to scratch the glass.

TUMBLERS. If tumblers have been used for milk they should have cold water poured into them to rinse off the grease, and prevent it sinking into the glass. Afterwards they should be washed in warm water and dry soap; rinsed well in cold water, and placed upside down on a tray to drain. Dry with a linen glass cloth, and polish with a leather: old serviettes make capital glass cloths. Two or three times a week add a little vinegar to the rinsing water, as this brightens the glass and prevents it from becoming stained; cold water is essential for the rinsing: if hot, the water causes the glass to appear clouded and smeared.

GLOBES should be washed at regular intervals after being well dusted. They are washed in the same way as tumblers, and allowed to drain until dry; this retains their brightness: wiping often causes a smeared appearance.

A pulp bowl, costing about 2/9, is the safest utensil for washing glass, as a slight concussion does not result in breakage.

MIRRORS should be kept well dusted; a daily rub with a pad of tissue paper secures good condition. To remove smears and render the glass brilliant, moisten a rag in methylated spirit, dip it in dry whiting, and rub the glass thoroughly; taking care that the whiting does not penetrate between the glass and the frame, as it is exceedingly difficult to remove. The mirror must be rubbed when dry with a duster and polished

with a leather. Fly-marks may be removed by the application of a small flannel bag containing a square of laundry blue.

Silvered or mirror-glass was first made in England in the seventeenth century by the use of tinfoil and quicksilver, which were caused to adhere to the glass by heavy pressure. It is now made quite differently; nitrate of silver being poured on highly polished glass, protected when dry with varnish, and finally with a layer of paint.

WINDOWS

ORIGIN. Glass windows were first used by the Italians; but in the time of William Rufus they were introduced into one or two palaces and churches in England. In the reign of Queen Elizabeth they were so rare a possession that the Earl of Northumberland, who owned some, carried them about from palace to palace as portable furniture. They were not usual in ordinary dwelling-houses until the reign of Queen Anne.

In 1695 the "Window Tax" was levied on all houses which contained more than six windows, and were worth more than £5 per annum. It was much objected to in the days of Pitt, and abolished in 1851, the "Inhabited House Duty" taking its place.

PLATE glass ($\frac{1}{4}$ -inch thick), which is used for shop windows, is highly polished, and costs $1/6$ per foot.

CROWN or **SHEET GLASS** is used for ordinary house windows, and is much thinner, costing $4d.$ per foot.

GROUND or **OBSCURED** glass is used where it is necessary to admit light and air, but where privacy is desirable: the usual price is $6d.$ per foot.

For conservatory and hall doors there are many fanciful designs, amongst them being the following: Morocco, Oceanic, Shell, Quilted, Murranese, Rippled, Kaleidoscope, Arabesque, and Checquered. Plain coloured glass in blue, amber, ruby, or green tints may be bought at $1/-$ per foot: the coloured "Rolled Cathedral" is of a better quality; "Rolled," "Fluted," or "Corrugated" glass is used in skylights and for roofs; "Wired Rolled" glass is proof against stone-throwing.

HORN WINDOWS. Windows were formerly made by heating horn to a jelly, and making it into thin sheets, which kept out the cold and admitted a moderate degree of light. In some cases oiled paper was used as a substitute.

CLEANING WINDOWS. 1. Choose a time when the sun is not shining ; for if the sun shines on a wet window, no amount of rubbing will prevent it from being streaky when dry ; also avoid a frosty day, as the glass then easily breaks.

2. Thoroughly dust the window inside and outside, and wash the woodwork.

3. Wash the glass with a sponge or linen cloth wrung out of tepid water containing a few drops of ammonia or paraffin, getting well into the corners.

4. Dry with a clean duster, avoiding one which would leave the glass linty.

5. Polish with a cotton duster, a leather, or pads of newspaper.

Leather rings, composed of scraps of chamois leather, and costing about 6½d. each, may be purchased for this purpose ; but they soon become hard, and are then apt to produce scratches.

When cleaning the outside of a window from the inside, spread a cloth over the paper below the sill to prevent marking it with the heels. No one should sit thus to clean the outside of windows on the upper storeys, as in this way many terrible accidents have occurred. Either window-cleaners should be employed or a window-cleaning chair be used.

ANOTHER METHOD. Dip a soft cotton cloth first in methylated spirit, then in whiting, and rub the glass well, inside and outside. Polish when dry with another cloth and paper. The disadvantage of this mode is that the whiting is rather apt to fall about, producing a white dust.

PAINT SPLASHES. Strong hot vinegar may be rubbed on the glass to remove paint or putty.

PICTURE GLASSES. These should either be treated by the last-mentioned method, or simply by a pad of newspaper dipped in tepid water, then dried, and polished with dry newspaper. Printer's ink is very effectual in removing marks of any sort.

TO RENDER WINDOWS OPAQUE. Dab the glass carefully and evenly with a lump of putty until the surface is uniformly covered. For temporary purposes, Epsom salts may be dissolved in water and applied freely ; but moisture soon spoils the effect.

BADLY FITTING WINDOWS

Felt stopping may be bought in 6-foot lengths for 10d., but old felt answers the purpose quite well. This should be held in place by a small wooden beading ($\frac{1}{2}$ d. per foot), which may be stained or painted to correspond with the surrounding woodwork. Rubber draught-stopping may be bought for the same purpose, but it soon perishes, becomes hard and shrinks.

RATTLING WINDOWS

These may be silenced by wooden wedges ; but probably a pair of rubber wheels fastened to the window frame by screws through their centres, so that they revolve when the sash is raised or lowered, are better, though not so permanent.

CHAPTER XX

China

Manufacture—Washing China Ornaments—Sorting, preparation and washing of Breakfast or Dinner Things—How to mend.

CHINA is made of a hard rocky stone of the nature of flint, which is ground to a fine powder, and then mixed with a soft clay. The beauty of china depends very much on the proportions in which these materials are mixed ; for superior varieties half of each is used. It is thoroughly kneaded with the hands, then moulded into shape, and partly baked to turn it into what is called biscuit. After this process it is painted, gilded, glazed, and baked once more.

It was first brought into Europe from China, and the Chinese still excel in its manufacture. Their dragon china is especially valued, being difficult to procure. The figure on it (being the imperial arms) shows that it is only intended for the Emperor's use.

Sèvres china, which is most costly, is made in France, and Dresden china in Saxony: the raised figures and flowers on the latter are very delicately and naturally coloured.

WASHING CHINA ORNAMENTS

1. Dust well with soft duster or old silk handkerchief.
2. Brush gently to get out dust from crevices.
3. Sponge in warm soap lather.
4. Rinse in warm water to remove all soap.
5. Drain them on a tray.

An old toothbrush is very useful for removing dirt from raised flowers, etc.

In the case of very large vases with narrow necks, which will

not permit of wiping inside, avoid washing, as if left damp they smell fusty ; merely dust the inside with a feather brush.

Avoid use of soda, which may affect gilt and colour.

The treatment of breakfast, tea, or dinner things may be divided into three heads :—

I. Preparation and sorting.

1. Empty cups into slop-basin, and pour cold water into the milk or cream jugs.
2. Scrape any bits from plates, and burn all refuse.
3. Empty teapot into a colander or sink basket.
4. Empty coffee-pot, and burn dregs.
5. Remove any remaining meat on to a clean dish.
6. Sort everything into piles of one kind at the right hand.
7. Prepare a bowl of hot soapy water, a clean dishcloth, a bowl of clean hot water : one tray for draining and another for the dried china, and have glass and tea cloths in readiness.

II. Method of cleaning.

1. Wash the cleanest things first, such as glass ; then silver, or, if attending to breakfast or tea things, commence with the saucers and tea plates ; then proceed to the cups, and so on. In washing dinner things the cheese plates follow the glass and silver, then the pudding plates, lastly the greasy plates and dishes, for which a mop may be used.
2. Rinse in very hot water.
3. Drain on a tray.
4. Dry thoroughly, remembering that a wet towel leaves no polish. A final polish may be given with a second towel.

III. Replacement. Put away immediately, placing the freshly-washed china at the bottom of each pile, so that the lower china is used regularly, and does not become dusty.

Hot water is preferable to cold for rinsing, because, if by any chance the grease is not quite removed in the washing, the rinsing water will get rid of it ; also china dries more quickly after the use of hot water.

In large establishments plate racks are often used. In this

case, the china after rinsing is placed singly in the rack, and allowed to remain there until quite dry. It is usually placed either over the sink, or over a draining board, so that the droppings from the china do not make any mess. Portable plate racks may be bought at 7/6 each.

Oval pulp bowls (2/9 each) are to be recommended for washing up; the pulp being a safer substance, in case of contact, than wood, earthenware, or metal. Oval ones are preferable to round, as dishes can be more easily washed in them. Pulpware should be dried after use, as this tends to prolong its duration. Wooden bowls are apt to warp, crack, and to become leaky in hot weather if left long unused.

Dishcloths may be bought at 11½d. per dozen. Many people knit them with unbleached knitting cotton (using coarse bone needles) and insist on their being used for no other purpose than washing up. Knitted ones are easily distinguished. Care should be taken to change the water as soon as it becomes dirty, greasy, or cool; plenty of hot clean water and dry towels are essential; otherwise the china looks dull and smeared. Bacon plates should be scraped, or wiped with paper, before being placed in the washing water.

For the washing of knives, see Chapter XVI.

Hudson's dry soap makes a good lather. Instead of using it direct from the packet, place it in a jar, and pour on it 1½ pints of boiling water: this forms a thin jelly, and may be used as required.

Some china cracks very quickly when hot tea is poured into it. In order to prevent this the following treatment is effectual: place the new china in a large fish-kettle (putting straw between the layers), cover it with cold water, and allow it to come slowly to the boiling-point. After boiling a few moments, take the kettle from the fire, and allow the china to remain in it till the water is quite cold.

In washing-up, some people place the china in the bowl, and then pour very hot water on to it. This is a bad method, and is often the cause of cracks.

Special attention should always be paid to handles of jugs and of teacups, rims of china teapots, and any fluted parts. Teapots should be dried inside as well as outside, and the lid should not be fitted on tightly, but the air allowed to circulate

freely to avoid a musty taste. Recent tea stains may be removed from china teapots by steeping over-night in hot water and soda, then rubbing the marks with a cloth moistened in vinegar or ammonia, and dipped in salt.

Marks of burnt milk may be removed from pie-dishes by rubbing with salt ; if very obstinate, mix a little crushed egg-shell with the salt.

China milk-jugs should be steeped in cold water before washing, as hot water hardens the albumen and makes it cling to the sides. Narrow-necked ones should not be chosen, as it is almost impossible to wash and dry the body of the jug. Those that are the same width throughout are advisable, as any trace of milk soon causes a sour smell and taste.

Towels and dishcloths should, after use, be scalded, rinsed, and hung in the open air if possible, then folded and put in a drawer. If left in the scullery they may be used for various unsuitable purposes.

Small clothes-horses, costing $6\frac{1}{2}d.$ each, are useful for drying tea and glasscloths, where there is much washing-up. The cloths may be placed, when wet, before a good fire, and will become dry in time to be used again during the same washing-up, as soon as other cloths have been used till wet.

Before commencing the washing-up, saucepans, frying-pans, or any culinary utensil used in the preparation of the meal, should be three parts filled with water, a little soda added, and allowed to boil, so as to be ready for washing when the china and other articles are finished.



CHOICE. In buying china it is wise (where means are limited) to buy a pattern which can always be matched, and deficiencies renewed. The great points to be secured in the choice of china are transparency and thinness ; the maker's mark also is found on most of the good specimens.

PORCELAIN. The difference between earthenware and porcelain lies in the fact that the latter is a half-vitrified substance in a state between earthenware and glass, and is thus a more transparent material.

STONEWARE is hard pottery, glazed with fused salt ; it is manufactured on a large scale in Staffordshire. It is made in pretty shapes and neat patterns, and being very strong, is well adapted for use in schools and large families.

HOW TO MEND CHINA

RIVETING. For valuable china, or china which will constantly be washed, this mode is most advisable and can be done cheaply—but not by the amateur. Seccotine, fish glue, and diamond cement are all good for repairing. Before applying either, the broken edges must be quite clean and dry. Warm them before a fire, and then brush over a very small quantity of the adhesive mixture, and bind the broken parts tightly together. When several pieces of the same article are broken, the most satisfactory way is to allow one piece to set before attempting to join another. Another good plan is to paint the edges with white of egg, dust with a sprinkling of plaster of Paris, and press them together. This is a colourless medium and does not show a dark crack.

CHINA PANTRY. The edges of two or more shelves in the china pantry should be fitted with hooks on which to hang cups, custard glasses, hot water jugs, etc. In choosing hooks, remember that the curved hooks  are much safer than the square , as with the latter there is more danger of the handles of cups being broken off. An inventory of the contents should be placed on the wall, so that all breakages can be recorded and articles renewed when necessary.

CHAPTER XXI

Marble

Varieties—Recipe for Cleaning Mixture—Modes of cleaning—Mending of Marble.

MARBLE is a kind of stone which is very hard, compact, and firm, and capable of taking a high polish. It comes from Greece, Italy, Spain, and France. Large quantities are also obtained in Great Britain, chiefly in Devonshire, Derbyshire, and Westmoreland.

VARIETIES. There are many varieties, such as—

CARRARA, a semi-transparent marble coming from Italy.

PARIAN, a dead white, used for making statues, which comes from the Island of Paros, in the Archipelago.

VERDE ANTIQUE, a green marble only found in Egypt.

SICILIAN, white, veined with grey ; used much for mantel-pieces.

STATUARY, a plain white, which, if exposed to a damp situation, soon becomes discoloured.

ROUGEMONT, a dark terra-cotta veined with white.

Marble-topped washstands are now almost universal. Care should be taken that water is not allowed to remain on the slab, as even a small quantity makes the marble a dark colour, and continued damp produces an apparent iron-mould, which is really the clay intermingled with the white limestone. There are many ways of cleaning marble ; but mere dirt and stains, caused by recently spilt liquids, can often be removed by a vigorous application of Sapolio. Deeper stains can sometimes be removed by the following process, which is, however, somewhat lengthy.

RECIPE. Mix together equal parts of soft soap, quicklime,

and caustic potash. Apply this with a brush, and leave it on the marble for several days, after which it must be washed off.

If a stain is not merely superficial, but has sunk in and formed some chemical combination, home treatment will not be sufficient ; the only remedy is to have it rubbed down to a fresh pure surface and re-polished. Oxalic acid, dissolved in hot water, may be tried ; but it must be rubbed off quickly to prevent the acid doing further mischief.

Oxalic acid is a very active poisonous juice found in the well-known " wood-sorrel."

ORDINARY WASHING OF MARBLE

1. Wash with warm water and soap, using a nail-brush ; if necessary, remove stains with Brooke's soap or marble cream.
2. Rinse in warm water ; dry well.
3. Polish with furniture cream, or with milk.

RECIPE FOR MARBLE CREAM

INGREDIENTS. 2 ozs. washing soda, 1 oz. precipitated whiting, and 1 oz. pumice-stone powder.

METHOD. Pound in a mortar, or crush with a rolling-pin ; then moisten with sufficient boiling water to make the mixture the consistency of cream.

USE. Apply with a penny bristle brush, and leave it till dry ; then wash off with hot water, dry, and polish.

This mixture should be kept in a well-corked bottle.

ANOTHER MIXTURE

Equal quantities of soft soap and pearlash to be applied with a flannel and left for an hour or more.

Pearlash is potash burnt red-hot to make it purer and whiter.

Potash is a salt of alkali, obtained by burning vegetable substances ; it is called potash because formerly it was prepared in large iron pots.

HOW TO MEND MARBLE

Slender parts of ornamental marble, such as handles of vases, can be easily mended with Seccotine, fish-glue, or any patent adhesive medium. Solid marble should be treated with plaster of Paris mixed to a stiff paste with warm water. It must be used immediately after mixing, as it quickly becomes hard.

Plaster of Paris, costing 1*d.* per pound, is made from gypsum ; a form of lime which is beautifully white ; the cheap statuettes often on sale in the streets being formed of it.

CHAPTER XXII

Pictures

Care of Oil and Water-colours—Cleaning Oil-paintings, Mounts, Gilt Frames—Care of Books—Japanned and Papier Mâché Goods—To clean Ivory—To cool Wine—To polish and mend Tortoiseshell—To remove Glass Stoppers.

CARE should be taken not to hang pictures on a damp wall as this produces brown spots on any kind of engraving, drawings on paper, or even on cardboard mounts; whilst it produces a slight mildew on oil-paintings. Avoid walls near which the hot water pipes run, as this is apt, in canvas paintings, to make the paint blister and crack. If pictures are hung facing the bright sunshine they are very apt to fade. Four small pieces of cork should be glued to the back, one on each corner: this, keeping the picture a small distance from the wall, secures ventilation.

Pictures should be dusted daily with a feather brush.

HOW TO TREAT OIL PAINTINGS

Periodically remove the pictures from the walls, and—

1. Dust the front, sides of frame, and also the back.
2. Rub lightly and quickly all over with a raw potato, taking a fresh slice as soon as one is soiled, and being careful not to press heavily, or the canvas will be strained, and small cracks will be caused.
3. Wipe gently with a soft cloth at once, because if left wet the moisture will penetrate the varnish and cause it to become opaque.
4. The cleaning may be finished by wiping with a little soft cotton wool.

Amateur restoration of really valuable oil-paintings is not to

be recommended. Professional cleaners employ benzole, which is a powerful solvent, the use of which requires to be thoroughly understood.

Nowadays oil-paintings are often protected by glass. Care must be taken that it does not actually touch the surface of the picture.

GILT FRAMES

Good English gilt should be wiped gently with a damp leather and dried with an old silk duster, after it has been thoroughly dusted; using a brush to reach any intricacies of pattern.

If the gilt is of inferior quality, and has been allowed to become discoloured, onion water should be applied with a soft old rag; then careful wiping should follow.

ONION WATER

Boil one large or two small onions in one pint of water until the principal of the vegetable has been extracted, or until tender; strain, and use when warm, not hot.

MOUNTING WATER-COLOURS

If this task be attempted in the home, care must be taken that the glass is free from blemish, and quite clean; that the picture and mount are perfectly straight, and the margin on each side is of equal size.

TO CLEAN MOUNTS

1. Thoroughly dust the frame all over, and carefully remove the picture.

2. Wash the glass on both sides with a pad of wet newspaper, then polish with dry paper.

3. Take a piece of soft bread about two days old, and wipe the mounts carefully with this, doing a strip at a time. As soon as the bread becomes soiled, take another piece, and continue till the whole is cleaned. If the mount is at all discoloured, the more satisfactory plan is to buy a new one, remembering that the tinted mounts are very durable. After it has been placed, be careful to paste strips of brown paper on to the back to keep out the dust.

SPRING CLEANING OF BOOKS

Bookcases should be entirely emptied, all corners well brushed, and the polished parts cleaned in the usual way. While empty, they should be moved out from the wall (if not fixtures) to allow of cleaning behind and beneath. If there are leather flaps to the shelves, they should be wiped with a soft rag dipped in white of egg, then polished with another soft cloth.

The books should be carried to some unfurnished room, or preferably out-of-doors; each one should be brushed with a feather brush, then knocked to get the dust out, and, lastly, very lightly dusted with a clean duster.

FOR GENERAL USE. A feather brush is always preferable to a duster for books, as rubbing rapidly reduces the gilt and makes the bindings shabby.

Gas quickly tarnishes the edges and gilt lettering on the covers. Books are now so cheap that they do not always command respectful treatment. In order that they may last in good condition, the following hints should be remembered:—

CARE OF BOOKS. 1. Exposing to the heat of a fire warps the binding.

2. Corners should not be turned down or leaves folded in halves.

3. Dragging a book out from the shelf by the binding at the top is hurtful.

4. If books are wedged too tightly in a case they become shabby.

5. Bookcases should not be placed against outside walls on account of the probable damp.

6. A book-marker should be thin: a pencil or thick substance displaces the leaves.

7. A blunt knife of wood, ivory, bone, or metal should be used for cutting new books, not a sharp instrument.

8. If any liquid be spilt on a book, wipe it off at once gently with a soft cloth or absorb it with blotting-paper: do not dry it by a fire.

9. Do not turn a book on its face, or place any weight on an open book.

10. Never open a large book from the ends or cover, but from the centre.

11. Borrowed books should be covered to avoid accident. Ornamental paper book-covers may be bought for 1*d.* each.

12. Never bend back the covers of a book, but keep them both level.

13. Marginal notes are usually superfluous and undesirable.

JAPANNED AND PAPIER-MÂCHÉ GOODS

1. Sponge in lukewarm water, using a little soap if spotted or greasy.

2. Dry thoroughly.

3. Polish with a soft cloth and a sprinkling of flour.

4. Finally polish with a leather or Selvyt cloth.

The brightness of these goods is soon entirely lost if hot water is used, as the japanning soon cracks and wears off. Never place hot plates, jugs, or dishes on them without a cloth or stand, as they cause blisters and also leave white marks.

TO CLEAN IVORY

1. Wash well in lukewarm soap lather, using an old tooth-brush for any carved parts.

2. Place in bright sunshine some hours, keeping the ivory wet with soapy water to prevent warping.

3. Wash, rinse, and dry.

4. If still stained, clean with a little whiting moistened with lemon juice, or with nitric acid, one part to ten parts water.

TORTOISESHELL

This should be rubbed with powdered rotten-stone and oil, then with jeweller's rouge, and lastly with a leather.

TO MEND TORTOISESHELL

Bind the broken articles together with a tape. Heat a pair of curling-tongs, and with them press the broken parts until they unite ; the heat will speedily effect their cohesion.

TO KEEP CORKS AIR-TIGHT

1. Dip in a mixture of equal parts of mutton suet and white wax, and allow this to become hard.

2. Place the corks well down in the necks of the bottles, and then dip in the following mixture: $\frac{1}{2}$ lb. cheap red sealing-wax, $\frac{1}{2}$ oz. beeswax, and $\frac{1}{2}$ lb. resin. These ingredients are to be melted in an old iron pan, and stirred with a candle to prevent burning. The tops may be ornamented by pressing with a thimble or seal.

Another method of treatment, much in vogue with chemists, is the following: The head of the corked bottle is dipped in gelatine which has been dissolved with a little glycerine in a gentle heat.

TO COOL WINE

The bottle or decanter should be covered entirely with the folds of a wet cloth, then set in a draughty place till required for use.

TO REMOVE GLASS STOPPERS

With a feather apply a few drops of any sweet oil round the stopper, close to the mouth of the bottle, and place it about a foot and a half from the fire. The oil will introduce itself between the stopper and the neck. When it is warm, gently strike the stopper on one side and then the other with a small piece of wood; then try it with the hand. If not at first successful, add a little more oil and try again.

RE-CHARGING ELECTRIC BELLS

Crushed sal ammoniac ($\frac{1}{4}$ lb. to 1 qt. cell) is placed in a jar, which is then nearly filled with water. The rim of the jar is then wiped dry and thinly coated over with oil or vaseline to prevent the saline solution from creeping over the edge, and so causing a deposit on the outside. The battery should be covered, and if kept in a cool place evaporation is retarded. After about eighteen months the bells will become feebler and finally silent which is the signal that a fresh re-charging is necessary. New zinc rods cost 3d., but often the old one simply requires scraping to brighten it sufficiently.

A DRAUGHT UNDER THE DOOR

For this the most lasting cure is the arrangement of a roller working in slots, so that it may rise over the carpet or rug when the door is opened.

LOCKS AND KEYS

A lock that proves obstinate should if possible be taken off. It will probably be found clogged with oil and dust, which paraffin speedily removes. After it is thoroughly clean, all the parts which rub together, also the key, should be anointed with a good lubricating oil. Then the superfluous oil should be wiped off, as it would only attract dust and again cause stiffness.

TO MAKE PUTTY

Mix whiting thoroughly with linseed oil, kneading till it acquires the desired consistency.

FRENCH POLISH

2 ozs. shellac, 1 oz. gum mastic, 1 pint methylated spirit. Crush the gums, sift through muslin, dissolve slowly over gentle heat, add the spirit, and bottle and cork at once.

Put a piece of cotton wool saturated with this polish on linen, doubling it over to form a pad, and then polish; every movement being in a circular direction. Much energy, time, and patience are necessary to obtain a pleasing result.

NEW WASHERS

When a washer is worn out, as is seen by the continual dripping of a tap, a new one can easily be substituted. Turn the water off at the main and empty the pipes by turning on the taps. Remove the faulty tap and unscrew it, removing the old washer; replace with a new one, screwing the tap firmly together again and restore it to its original place, being very careful that the screws are tightly turned. Rubber washers costing $\frac{1}{4}$ d. each are most frequently used, but require renewing as rubber deteriorates and perishes. Leather or asbestos may be utilized for the purpose, but are not so satisfactory.

CHAPTER XXIII

Cleaning Brushes

Materials used—How to clean Toilet and Household Brushes—Care and Price—Treatment of Combs—Cost and Care of Sponges.

BRUSHES

MANY of these are made of bristles obtained from different breeds of pigs, and vary in length from $\frac{1}{2}$ to 6 inches ; the longest, costing $\frac{1}{2}d.$ each, are used by shoemakers. The next in quality are used for toilet-brushes, more inferior kinds are for painters' brushes, and the least valuable bristles for household purposes.

FIBRE comes from the large American forests. It is used chiefly for scrubbing-brushes, often in conjunction with bass : this latter is also an undergrowth of the forest.

BASS. Englishmen used to pay for it on the barter system with Bass's beer : hence the name. Bass is used principally for yard-brooms and for brushes to scrub stone.

HORSEHAIR is utilized for clothes-brushes, blacking, and blacklead brushes, etc.

So-called **CAMEL-HAIR** brushes are often made from the fur of the squirrel.

WHALEBONE is the main constituent of the sweep's long chimney brushes.

MAKING. The most usual mode of manufacture is, after preparing a piece of wood the proper shape and size, to bore holes at equal distances, then to pull through from the back a loop of wire, place a bunch of bristles in the loop, pull it tight, and carry the wire along the back to the next hole and repeat the process. Another piece of wood is glued or riveted on the top to give neatness to the back.

TOILET-BRUSHES

To these particular attention must be paid to remove any particles of loose skin and the natural grease from the hair. They must be treated with more care than ordinary household brushes, or the bristles will become discoloured.

METHOD. 1. Dissolve two tablespoonsful of borax in a little boiling water.

2. Add this to 2 quarts of lukewarm water in a shallow vessel (the water being just deep enough to cover the bristles ; a pie dish is convenient), and a little melted soap.

3. Remove all hairs and beat the water with the brush by dabbing it up and down, taking care that the back of the brush is not wetted.

4. Rinse very thoroughly in warm, then with cold salt water, as this keeps the bristles a good colour and prevents them from becoming soft.

4. Tie a bit of string to the handle, and dry after well shaking, in the open air if possible ; if in the house, take care it is not too near the fire, or the tips of the bristles may singe and the wood warp. Always hang the brush, or let it stand with the handle upwards, to prevent the water trickling down and destroying the polish.

6. Polish the back.

If the water is too warm the bristles will be softened. For fear of this result let the brush be dried as quickly as possible.

If the brush is very greasy, add one dessertspoonful of Scrubb's Cloudy Ammonia to the borax water.

Never dry the bristles with a towel, as this makes them soft and misplaced.

If the backs of ivory-handled brushes are stained, they may be cleaned with a little whiting moistened with lemon juice.

CHOICE. If carefully washed, good brushes may be used for quite twenty years ; if of poor quality and carelessly washed, they soon become useless. It is not advisable to purchase those that are very long in the bristles, as they break the hair through becoming entangled in it. Thoroughly good brushes can be bought from 4/6 upwards ; silver-backed ones from 15/6 upwards, according to the weight of the silver and the quality of the bristles.

COMBS

CHOICE. Cheap combs are not economical, as the teeth are very apt to split when in use ; the result being that they catch in the hair and break, it. Those made of tortoiseshell are superior to any other, as, though more expensive in the first place, they outlive many cheap ones.

Xylonite combs are sold from 1/- to 1/4 each. Xylonite is of British manufacture, and is made of cellulose which is soaked in acid, then dissolved in spirit and mixed with any desired colour.

Black vulcanite combs are the same price, but are liable to break if allowed to fall. Vulcanite, or Ebonite, is composed of two-thirds indiarubber and one-third sulphur, kept at a high temperature for several hours, then allowed to cool, when it becomes hard and brittle.

Combs should be washed as rarely as possible, as the teeth are inclined to split. They may be cleaned by pushing a piece of stiff paper, or an old postcard, between each tooth and working it backwards and forwards ; or by winding a piece of fine string between the thumb and little finger, and moving it up and down between the teeth.

A piece of paper should be spread on the table during the cleaning, which, with the dust contained in it, should be burnt immediately.

TO WASH COMBS

1. Remove dirt with a hairpin or paper.
2. Scrub with a nail-brush in soapy water and a little ammonia.
3. Rinse in hot, then in cold water.
4. Dry on a towel.

For tortoiseshell use warm water, not hot, as this causes the comb to bend.

TOOTH- AND NAIL-BRUSHES

These should be allowed to stand for one or two hours weekly in cold water containing a little borax or Sanitas (preferably the latter), to sweeten and cleanse thoroughly. Nowadays most sets of bedroom-ware are provided with a small upright jar, as a substitute for the old-fashioned oblong tooth-brush

box. This is a great improvement, as if brushes are covered while wet they smell fusty, and the bristles rapidly become soft. It is a good plan to put these brushes after use on the window-ledge until dry.

Nail-brushes may be bought from 1*d.* ; tooth-brushes from 6*d.* As soon as the bristles come out when in use, a tooth-brush should be discarded, as painful surgical cases have occasionally arisen from the lodging of a bristle in the palate or back of the throat.

SPONGES

CARE OF. If these are not properly treated they soon become disagreeable and slimy. Soap should not be rubbed on them, neither should they be allowed to lie in soapy water, nor put away with any water in them. They should not be wrung out, as this destroys the elasticity and tears them, but well squeezed. If slimy, they should be placed in strong salt water for some hours, as this stiffens them. If they have been so neglected that this treatment is not effectual, then add one wine-glass of muriatic acid to 3 pints of water, and steep the sponges in it. Alkaline solutions will not remove the slime.

It is well to thread a loop of string through a sponge, and hang it after use on a nail outside a window, or put in a sponge-basket ; but never put it while wet in a sponge-bag. Sponge-baskets, being more open, are preferable to sponge-bowls.

PRICES. Bath sponges, from 2/9 to 5/9 each ; honey-comb, from 3½*d.* upwards ; fine cup sponges, from 1/9 to 3/6 ; Turkey sponges, from 6*d.* to 1/8.

The sponge is brought alive from the sea. The living part, which is inside, being called the "sarcodæ ;" the flexible skeleton to which it is attached being the actual sponge. They are mostly obtained by divers, the best being procured from the tideless waters of the Mediterranean.

Rubber or Complexion sponges are much in favour ; they may be used with hot or cold water with or without soap, but do not become slimy. After use they should be rinsed in clean water. They may be bought from 8½*d.* upwards according to size.

HOUSEHOLD BRUSHES

CLEANING. Those that are in constant use require washing every week, as dirty brushes make dirty floors.

1. Make a lather of melted soap and hot water, adding about one dessertspoonful of soda. Have just sufficient water to cover the bristles.

2. Pick off the dust and dab the brush up and down till clean, changing the water if it becomes very dirty.

3. Rinse thoroughly in warm water, then in cold salt water, shake well in the open air, and dry as quickly as possible.

The above instructions only apply to the washing of the hair or bristles. Handles, if of plain unvarnished wood, should be treated according to the rules for scrubbing wood (see Chapter XIV.). The handles should be attended to before the bristles, to avoid the water dripping from the latter.

Painted or varnished handles should simply be washed with warm water, soap, and a flannel, and dried with a cloth immediately.

A brush should be kept solely for the kitchen and scullery floors, as these become very dirty.

PRICES. Cheap brushes are unsatisfactory, as they soon become poor and thin. Satisfactory hair brooms vary in price from $\frac{3}{6}$ to $4\frac{1}{3}$; the latter being very durable. The handles are often sold separately, and cost $2d.$ each. Bass brooms for yards and garden paths cost from $1/0$ to $1/6$. Banister brushes, which have whisk on one side and hair on the other, usually cost about $\frac{2}{6}$; carpet whisks from $\frac{2}{9}$ to $\frac{3}{3}$; scrubbing brushes from $3d.$ to $9d.$; bass sanitary brushes $\frac{1}{3}$; whisk furniture brushes $\frac{1}{6}$; egg or pastry brushes from $6d.$; saucepan brushes, $7\frac{1}{2}d.$

CARE. In large establishments it is well to have a brush cupboard to ensure tidiness and freedom from dust. Where there is a housemaid's cupboard, the best plan is to keep all brushes required for bedroom work in it, and so lessen carrying.

Brush handles should be bored and a loop of strong string inserted, and the long-handled brushes hung so as to be about six inches from the floor. If allowed to rest on the floor the hair or bristles will be displaced, wear out more quickly, and become dusty; or if the brushes are kept with the hair or

bristles upwards, dust settles on them, unless they are kept in a cupboard, when this latter position is most excellent.

WHISK CARPET BRUSHES

In order that these may retain their strength and not become brittle, they should, after all bits have been removed, be occasionally placed in cold salt water overnight.

CHAMOIS LEATHER

Chamois leathers, prepared from the skin of the Swiss goat, are becoming comparatively rare. Washleather (made from sheepskin, which is soaked to make it swell, then split into two leathers) is more generally used.

WASHING OF CHAMOIS OR WASHLEATHER

Shake to remove dust, then wash by gently kneading in warm soap-lather containing a little ammonia, avoiding rubbing, which would quickly cause holes in the wet softened leather. Squeeze out the water, remembering that wringing by hand would probably tear it. Shake out as much moisture as possible, and while drying, pull, stretch, and rub at intervals to keep the leather soft and pliable.

SCRUBBING BRUSHES

Occasionally scald with boiling soda water, rinse well, beat on some hard surface, and as the dirt comes down remove it with an old skewer. When clean, rinse in cold salt water and dry in the open air.

CHAPTER XXIV

Boots

Preparation of Leather—Choice, care, and cleaning of Boots.

FIRST PROCESS. The hides are steeped for some days in pits containing lime-water ; this loosens the hair, which is then removed by scraping the skins on large upright blocks with a semi-circular knife.

SECOND PROCESS. This turns the skin into a waterproof substance by drawing out the moisture. The skins are laid in deep vats, then covered with oak-bark and water. This is a lengthy process, because if the tanning is hurried, the fibrous nature (on which depend the flexibility and durability of the leather) is not preserved.

THIRD PROCESS. After the tanning follows the greasing and waxing, to render the leather pliable. If the leather is to be coloured, now follows the dyeing.

VARIETIES. Glacé, patent, calf, and kid leather are amongst the many kinds used in the manufacture of boots and shoes. The soles of strong boots are usually made of ox-hide.

MOROCCO is the name given to goat skins prepared in the manner first invented in Morocco, but which is now most successfully carried out in London. Goat skins are better suited to this method than any other, as they absorb dye more thoroughly and produce richer colours.

PATENT is the name given to the varnished surface produced by a "japan," of which the chief constituents are linseed oil and Prussian blue boiled together. Seven or eight coatings are usually applied, the final one being mixed with copal varnish to produce a more glossy surface.

BUCKSKIN AND DOESKIN are both the prepared hide of

the deer. The finest tanned calf skin comes from the neighbourhood of Bordeaux ; the climate, bark, and water, combined with the French method, enable continental tanners to produce a leather of light weight and particularly clean, soft, fine nature.

CHOICE OF BOOTS

CHEAP BOOTS quickly become shabby and of poor shape ; they also soon burst into holes, letting in water and so rendering the wearer liable to chills. Handsewn footgear is much more durable than machine-sewn or pegged. When being measured the customer should stand on a piece of paper, and have the foot outlined on it, as this allows for the spreading of the foot during walking.

TIGHT BOOTS. Tight boots are most injurious. (1) They, by interfering with the circulation, produce cold feet and chilblains. (2) They cause excrescences, such as corns and bunions. (3) They produce an awkward gait and much suffering.

HIGH HEELS are also to be avoided. (1) They are often the primary cause of weak ankles. (2) The weight of the body is thrown forward, the strain coming on parts not adapted for the purpose. (3) No natural grace of movement is possible.

THIN SOLES are much more tiring than thick, and should not be chosen by those who have to stand or walk much.

LARGE FEET look smaller in brightly polished boots, as the gloss, reflecting the light, breaks up the outline ; but those who suffer with tender feet should abjure patent leather : also half a size larger is necessary owing to want of elasticity in this kind of leather.

CALF SKIN, or thin leather boots, wear better and are warmer than kid ; the leather should be as soft and pliable as is consistent with strength.

CARE OF BOOTS

The difference in the wear and appearance of a boot properly cleaned and treed, and one that is neglected and badly cleaned, is considerable ; the former has a bright, and clean surface, while the latter is either very dull, or caked with unevenly applied blacking.

TREES keep boots from wrinkling, preserve them in shape, greatly improve their appearance, and prolong their existence.

QUANTITY. It is a great economy to have three or four pairs in use, wearing them in turn, as they last quite six or eight times as long as one pair worn constantly. It enables the boots to be better aired and dried between each wearing, which adds to the durability of the leather.

NEW BOOTS should be worn a few times to mould them to the feet, then smeared over with vaseline and put aside for a few weeks to enable the leather to become perfectly seasoned.

REPAIRS. Good boots may be resoled several times by good workmen. To get the full value out of repairs the renovations should be allowed to become thoroughly dry and well seasoned before use, as in the case of new boots. They should be mended very soon after showing signs of wear.

The high heels of ladies' indoor dress shoes, which are made of wood, are frequently covered with thin kid, which becomes scratched and shabby after being worn a short time. Recently celluloid (which is unscratchable) has come into vogue for this thin coating, as it does not show signs of wear; but ladies should remember that it is highly inflammable.

MATERIALS FOR CLEANING

BRUSHES should be of a good quality and should be of hair. The one used for removing the dirt is of least importance, and must be harder than the others. The actual blacking brush should be of longer hair; the round ones, usually sold at 4½*d.*, with a blunt excrescence for removing the mud between the sole and the upper, are the most convenient for cake blacking.

The final polishing brush is of most importance, and should have longer, softer hair, and be of a good quality, to obtain the best results.

Brushes should be kept dry, and contact with grease avoided. If anything detrimental should adhere to them they require to be washed in warm water, only immersing the hair.

A grocer's box, painted black, makes a convenient receptacle for brushes and materials; the brushes should stand in an upright position, without touching one another.

LIQUID BLACKING is the cheapest ultimately. A hole should be made in the cork of the bottle, and a penny brush pushed through the space, to avoid wasting the contents.

PASTE OR CAKE BLACKING is liable to be insufficiently diluted, and irregularly or too thickly applied. Cheap blacking often contains an excess of acid which makes the leather crack.

If blacking is too thickly applied it (1) takes too much time and labour to obtain a polish ; (2) is messy to touch ; (3) is extravagant and apt to make the leather crack. It may be moistened with water, which is the safest medium ; but a polish is more quickly obtained by the use of vinegar, beer, or any acid. It must be remembered, however, that an excess of acid causes the leather to crack.

RECIPE FOR BLACKING

2 ozs. of ivory black, 4 ozs. of treacle, $\frac{1}{2}$ oz. of sweet oil, $\frac{1}{2}$ oz. oil of vitriol, and $\frac{1}{2}$ pint sour beer. Add the treacle to the ivory black, stir, and add half of the beer, to which add, when well mixed, the vitriol and oil, gradually, with the remainder of the beer. The treacle and vitriol preserve the leather.

METHOD OF CLEANING LEATHER BOOTS

1. If very wet and muddy, they should be wiped with a damp flannel when removed from the feet.
2. Dry thoroughly in a warm kitchen away from the fire.
3. Brush off all dirt.
4. Apply a small quantity of blacking.
5. Brush at once with a soft brush.
6. Polish with a second brush.

DRYING. If boots, when wet, are placed too near a fire they shrink, become hard, and are never comfortable again. They should be turned on their sides while drying, and, unless trees are available, should be stuffed with paper to retain the proper shape.

All dirt must be removed before the blacking is applied, or the boots will become grey.

KNIFE. A knife or sharp metal instrument should never

be used to remove the mud, as in this way the stitches are often cut.

POLISHING. The brush should travel lightly in long, regular sweeps from end to end, without force or pressure. Always clean the waist, that is the portion of the sole between the heel and the instep.

BONE. The leather in a new boot is more open, porous, and greasy than at a later stage. It will not readily shine until the surface is filled and the grease subdued. It may be slightly damped, then rubbed with a bone before applying the blacking. The bone used is preferably from a deer's leg, but any kind with a smooth surface answers the same purpose.

PATENT LEATHER

Dust thoroughly, then rub with a cloth dipped in white of egg, and polish with a soft duster or chamois leather ; or it may be rubbed over with a damp sponge, and then polished with a very small quantity of vaseline after it is dry. This method keeps boots soft and bright, and prevents cracking. Patent leather cannot be guaranteed ; the best brand is the "Summer-dried." Varnishes which dry quickly, and leave a substantial deposit, are not to be recommended, though they may be useful as a last resource for old boots.

GLACÉ KID

Should be rubbed over with an old rag dipped in a little milk, and polished with an old soft duster ; or boot cream may be applied in the same way. A brush should never be used, as it would scratch the kid.

SPIRIT BLACKING, sold in bottles with a sponge attached, often contain ingredients of a most destructive character, such as strong acids.

WHITE KID

Clean with benzine rubbed on with a flannel, being careful not to leave streaks. Put in the open air to remove the smell of the benzine, and then polish with boot cream.

RECIPE FOR BOOT CREAM

1 oz. crushed white wax (3d. per oz.), $\frac{1}{2}$ oz. powdered castile soap ($\frac{1}{2}$ d. per oz.), and 4 tablespoonsful of turpentine. Pour the turpentine over the crushed wax and soap, leave for twenty-four hours, then add gradually sufficient boiling water to make it of the consistency of cream. Cork in wide-mouthed bottles. When a black mixture is preferred, add lamp black to the above ingredients until a good black is produced.

CREAKING BOOTS

Soak the soles in salt and water, and leave them overnight in linseed oil. If not successful, hammer three or four sprigs through the outside sole.

TO PRESERVE BOOTS WATERTIGHT IN SNOW

Rub the crevice between sole and upper with "dubbing," and apply a little linseed or castor oil to the sole and the upper part.

WATERPROOF MIXTURE

1 pint drying oil, 2 ozs. turpentine, 2 ozs. yellow wax, and 1 oz. of Burgundy pitch. Shred the wax and pitch, dissolve in the turpentine, lastly add the oil, and mix thoroughly.

CHAPTER XXV

Choice, Care, and Cleaning of Blinds

Varieties of Materials—Prices—Advantages and Disadvantages of Venetian Blinds—Curtain Blinds—Cleaning Blinds—Making, etc.

IN order that a house may present a good appearance, it is important that a considerable amount of care should be expended on the window-blinds, the uses of which are to regulate the light, protect carpets and curtains, and screen from the gaze of the public. There are many varieties of material which can be chosen ; amongst those most in vogue at present are the following :—

LINEN. These may be bought either in cream or buff, plain or striped, or with a narrow line of red between the stripes. For durability there is nothing to equal the plain linen, as it is unweakened by bleaching or dyeing, and does not fade, and, being of a neutral tint, it harmonizes with the colours of any room. The usual cost of a pure linen blind of a medium size, including the roller and all the fittings, is from 8/- to 12/-. A valance of the linen, cut into vandyke points and trimmed with fringe, is 1/6 extra.

“DUCHESS,” OR EMBROIDERED BLINDS are made either of woven linen or holland, the embroidery being worked on net of the same shade, and trimmed with Cluny lace. These are more expensive, costing from 21/- upwards. The lace usually employed for ornamenting blinds is of two kinds, viz. Appliqué, a machine-made lace, and Cluny, which is hand-made. The former ranges from a few pence per yard upwards : but it is advisable only to buy a good quality, as the low-priced laces soon become dirty, and while being cleaned are often torn because of the inferior net used in their manufacture.

Cluny lace is hand-made, and worked in linen-thread yarn, and is decidedly the best for this purpose. Its price depends upon the weight of yarn contained in the lace and the elaborateness of the pattern. If the work is not too open, it can be cleaned with perfect safety.

A very satisfactory trimming, with the insertion and lace-edging combined, about twelve inches in depth, can be obtained for $1\frac{1}{4}$ per yard.

HOLLAND. Window hollands are also largely used, because, the dust falling readily off their slippery surface, they keep clean for a considerable time ; but they are more apt to crack through alternate exposure to sunshine and rain than those made of linen.

Biscuit-colour holland may be had from $9\frac{3}{4}d.$ per yard (the price varying with the width), or a medium-sized blind, with fittings complete, will probably cost from $8/-$.

Green holland ranges from $7\frac{3}{4}d.$ to $9\frac{3}{4}d.$ per yard. Red holland is $9\frac{3}{4}d.$ per yard. For a sunny window, colours are not to be recommended, as they are all more or less liable to fade.

UNION BLINDS are made from a mixture of cotton and linen and are therefore cheaper ; but, though fairly durable, they become limp more quickly than holland blinds.

PRINTED COTTONS. These, being covered with a design, do not show the dust so much as those with a plain surface ; but like all coloured blinds, they are apt to fade. They are not used largely for good houses except in back bedrooms and kitchens, although, for the front parlour of artisans' homes, they are still in great demand. They cost from $4\frac{3}{4}d.$ to $11\frac{3}{4}d.$ per yard according to the width.

FLORENTINE, OR BROCADE. May be had either in cream, or any other shade, and present a handsome appearance. They are usually about $8\frac{3}{4}d.$ or $9\frac{3}{4}d.$ per yard.

FESTOON BLINDS are, fortunately, not very fashionable ; they are extremely likely to get out of order, and are veritable dust-traps. Being hand-made, and usually of silk, they are very expensive, varying from $\frac{2}{3}$ to $\frac{4}{6}$ per square foot, according to the quality of the material used.

VENETIAN BLINDS (costing $6d.$ to $8d.$ per square foot for

flatted paint) are very durable, but frequently require retaping, and, at intervals, repainting and revarnishing. Constant dusting is also essential ; but, on the other hand, through their use the admission of light and air is easily regulated. They are not nearly as popular as formerly. They may be had in almost any colour, but for seaside use the brown staining is more durable than the more elegant tints. Clear varnished, 10*d.* per square foot ; varnished, 9*d.* per square foot ; renovating, 4½*d.* per square foot.

LANCASTER. A new material well adapted for blinds, with a painted surface, which can be washed with warm soapy water, rinsed, and dried with a soft cloth (10¾*d.* per yard and 1½ yards in width).

SUITABILITY FOR VARIOUS ROOMS

For the **DRAWING-ROOM** it is usual for the blinds to be made of the light-coloured dyed hollands, such as the cream and ecru glazed hollands, or the uncalendered linens of a biscuit or ivory shade, decorated with embroidered panels and valances (duchesse blinds), or with lace and fringe to match. The decorative brocaded or Florentine materials are also suitable for the drawing-room ; these, likewise, may be finished with lace or a fringe. For the **DINING-ROOM** the above-named materials, in darker shades, but less ornately treated, are as a rule employed, stripes being often chosen. For the **BEDROOMS** there are the green and blue glazed hollands (for those who object to the early morning sunshine), the cream hollands or striped linens, also printed cottons. For the **KITCHEN** the buff, blue, and dark hollands, printed cottons, or deep-shaded linens are recommended, as they do not so readily soil as the lighter materials.

CURTAIN-BLINDS

So far we have spoken only of the older-fashioned blind ; but frequently nowadays the curtain and blind are combined. These are specially adapted for windows of a certain shape. For these blinds another class of materials is necessary.

SILK-WARP CANTON CASEMENT FLAX—a mixture of silk and wool. A good quality may be bought in cream, or any

art shade, at 2/11 per yard double width ; a narrower one for 1/6.

CHALLI CASEMENT CLOTH, OR TAFFETA, is made of pure wool, and consequently feels harsher, and naturally has not the silky finish of the above ; both, however, are very serviceable, and of the same price. Union cloths are very similar ; but, being a mixture of cotton and wool, are not so warm for winter use.

CORDED REPP is another variety of pure wool cloth, and can be obtained in any tint.

MOHAIR is similar, but of a more wiry texture.

TUSSORE OR SHANTUNG SILK AND GOOD SATEENS may be used very satisfactorily for this class of blind.

PRINTED LINEN—that is, linen with a cream ground, with a coloured conventional floral design arranged at intervals—may be chosen to harmonize very pleasingly with the tone of the room. Printed cotton may likewise be chosen with advantage.

Self-coloured linens of any shade are obtainable, but are not to be recommended for sunny windows.

These blinds are all made with a double heading, forming a tiny upstanding frill ; ivory rings are sewn on, and they are either pulled backwards and forwards as required on a brass rod, or their position can be altered by the use of a cord and pulleys.

Small short curtains are now frequently used for the lower part of windows. The most general are the “Brise-Bise,” made of linen or silk, with lace insertions, costing from 1s. to 10s. 6d. each ; or the “Bonne Femme,” made of lace or net, and trimmed with a flounce, costing from 8½d. to 3s. 6d. per yard.

OUTSIDE SUN BLINDS

In selecting material for these it is necessary to choose between durability and an attractive appearance, as the two qualities are not always combined. If durability is desired, a blue-stripe tick must be selected, for such a tick can be made all of flax, and, consequently, it wears and cleans well. If brightness of colour is preferred, the recently introduced green, yellow, etc., material can be had ; but it must be borne in mind that, as flax refuses to take these dyes, there is little or none of

that material in the highly coloured ticks, which are mostly of cotton, and therefore are not adapted for hard use.

Plain white sailcloth wears well, looks clean and cool, but does not soften the light.

CLEANING OF BLINDS

VENETIAN BLINDS—(1) VARNISHED. Undo the ornament at the bottom of each tape ladder of the blind, allowing the cord to unthread ; take out every lath, and dust thoroughly, and then wash according to the directions for varnished paint (see Chapter XIV.).

(2) **UNVARNISHED.** After thorough dusting, wash according to the directions in Chapter XIV.

While the laths are down, it is a convenient time to ascertain if the ladder-tapes are in good condition. If worn, they should now be replaced, to avoid trouble afterward. If in good condition, but soiled, they may be steeped in cold water containing a little soda, then boiled. These tapes may be had in either white, buff, or any desired colour, with varying spaces between the rungs of the ladder. It will be found wise to buy the new to correspond with the original. Having nailed this tape firmly to the fixed lath at the top, place the laths in the slots arranged for them. Next thread the cord (preferably a new one) through the hole in every lath, placing it to the right and left alternately of the narrow horizontal tapes which connect the two wide tapes forming the ladder. When the cord has been threaded the entire length of the blind, pass it through the small metal ornament, and put a knot to prevent it from slipping back. In heavy blinds a central ladder-tape is often necessary in addition ; but frequently two tapes are sufficient.

SLIGHTLY SOILED LINEN OR HOLLAND BLINDS. These should be dusted thoroughly on both sides, then laid flat on a clean table, then rubbed lightly and evenly all over with stale bread, or with a stiff dough of flour and water.

OTHER METHODS OF CLEANING

1. Apply Monkey Brand soap on a clean cloth and rub well over the blind.

2. Cover the blind with powdered bathbrick, rub it well in with a clean cloth, then shake off, and rub it again.

3. Rub the blind with a clean flannel dipped in powdered cream-coloured starch, including the lace trimming ; roll up for 24 hours, then shake well to remove any particles of the starch.

DIRTY LINEN OR HOLLAND BLINDS should be taken off the rollers, dusted thoroughly, washed in warm soap lather, rinsed in warm water, starched in thick hot-water starch, ironed till partly dry, and then calendered or polished on both sides. Care should be taken when ironing not to stretch the blind out of shape, but to keep the hem perfectly straight, in order that, when replaced, it may roll up evenly. (For the recipe for preparing hot-water starch, see Chapter XXVIII.)

SILK-WARP CANTON CASEMENT CLOTH should be washed according to the directions for washing silk in Chapter XXX. ; the gum-water, however, should be omitted, and, as a substitute, a bath in 1 tablespoonful of methylated spirit and 1 pint of cold water should be given, to heighten the gloss.

CHALLI, CASEMENT CLOTH, TAFFETA, MOHAIR, AND REPP are all washed according to the directions given for washing flannel in Chapter XXVII. After drying, they should be smoothed over with a warm (not hot) iron.

PRINTED COTTON OR CHINTZ should be treated according to the instructions for chintz in Chapter XXX.

MAKING

To roll up well, every blind should have a hem $2\frac{1}{2}$ inches wide at each side and across the foot. This hem should be herringboned, the stitches being slightly further apart and shallower than when worked on flannel. Care must be taken to put it perfectly straight on the roller, and a tintack should be placed at each end to keep it in place. It should then be blanket-stitched on, with wide shallow stitches, which may easily be taken out when washing is again necessary.

CHAPTER XXVI

Daily Work of Hall and Staircase

Spring Cleaning—Composition of Dust—Rules for Dusting—Method of Dusting a Room—Dusters.

Daily Work of Hall, Stone Steps, Staircase, Bathroom, Sitting-room, and Kitchen—Treatment of Mats—Weekly Work of Staircase, Sitting-room, Bedroom, and Kitchen.

BEFORE doing the hall the staircase should be attended to. It should be well dusted daily, and, if there is not much traffic, swept twice a week ; but in a large household daily sweeping is necessary.

1. Begin at top landing and work downwards.
2. Take up the dust from the top and front of each step with a dustpan and brush, using the whisk side for the carpet and the hair for the varnished sides of the stairs.
3. After sweeping dust the handrail, each banister, and the sides ; the sides should first be rubbed with a damp rubber.

WEEKLY WORK OF STAIRCASE

Proceed as above ; but before sweeping slip out the rods to get out all the dust from underneath. Clean the brass rods. Polish the handrail and sides of the steps.

Stair carpets should be taken up periodically ; if they are much used twice a year is necessary. While the carpets are up, the walls and ceiling of the staircase and hall should be swept with a hair broom covered with a clean duster, changing it as soon as soiled.

DAILY WORK OF HALL

1. Take up all mats and beat outside the back door.
2. Shut all doors and sweep hall, burning the dust.

3. Dust the wainscotting and doors thoroughly.
4. Clean brass door handles.
5. If tiled or flagged, wash with warm water and soap, only using a scrubbing brush when necessary; wring out flannel and wipe as dry as possible. If carpeted, take up bits with dustpan and brush, and sweep weekly with a carpet whisk.
6. Replace mats.

HALL MATS

Mats are often held by the corners and beaten against the wall to get rid of the dust; but this method makes the corners wear out quickly owing to the strain of the weight. If the ground is dry, they should be put right side downwards, and beaten with strong sticks or broom handles.

COCOA-NUT FIBRE HALL MATS

These, after being beaten, may be cleaned in the following way:—

1. Carefully pick off any threads or flue.
2. Dip a clean bass broom into a bath of warm soap lather containing a little dissolved soda, and with it brush the mat thoroughly.
3. Dip the same broom into first hot water then clean salt water, and apply it all over the surface of the mat; the salt stiffens the fibres.
4. Leave in the open air to dry thoroughly.

TREATMENT OF STONE STEPS

MATERIALS. Two pieces of house flannel, bass scrubbing brush, cold water, and hearthstone. The soft hearthstone sold at the rate of two pieces for 1½d. is the best, as the hard stone is exceedingly gritty.

1. Sweep the steps from the top downwards with a hair broom.
2. Wipe the top step with the wet flannel, scrub with a bass scrubbing brush, doing the front and sides.
3. Wipe off water.
4. Rub the hearthstone on in a circular direction all over.
5. Make a pad of the second flannel, and work it in a circular direction, then horizontally, very evenly.

N.B.—Never dip the second flannel in water.

Stone window sills should be treated in the same way (to prevent their becoming green), taking care the water does not run down from the sill.

DAILY WORK OF BATHROOM

1. Lightly brush walls and ledges : if (as is desirable) tiled, wipe with a clean cloth.
2. Sweep up all dust on the floor and burn it.
3. Rub windows to remove marks of condensed steam.
4. Rub taps, and clean when necessary with metal polish.
5. Dust the ledges, window sill, door frame, gas globe, top of bath, etc.
6. Polish or rub up woodwork of bath.
7. Wash the lavatory basin, using dry salt to remove water-marks.
8. Leave the towels, soap dish, etc., quite tidy.
9. The bath should be rinsed to remove marks of scum : weekly it should be cleaned thoroughly with a wet flannel dipped in coarse dry salt or Vim.
10. If there is linoleum on the floor, rub it well, and once a week apply floor polish or beeswax and turpentine.

DAILY WORK OF A SITTING-ROOM

1. Open shutters, draw up blinds, and open windows.
2. Remove and shake rugs, cushions, table covers, etc., if not shaken and folded overnight.
3. If a fire is to be kindled, lay down hearthcloth, clean fireplace, then lay and light fire.
4. Lightly brush up the bits from the carpet with a soft brush, making as little dust as possible ; empty waste-paper basket into a dustpan, and burn contents at once.
5. Dust the highest things first, using a feather brush for pictures, gas brackets, and books.
6. Dust the skirting board ; if there is a wooden surround, wipe it with a damp rubber, then with a dry duster.
7. Replace rugs, table covers, etc.
8. Sponge the leaves of plants, and attend to flower vases.

WEEKLY TURNING OUT OF A BEDROOM

1. Collect required apparatus, viz. long carpet whisk, dust-pan and brush, Turk's-head mop, dust-sheets, curtain bags, tea leaves, dusters, tray, mattress brush, housemaid's box, furniture cream and rubbers.

2. Roll up rugs and mats, and carry out of room to be shaken.

3. Attend to washstand, giving ware and glass special weekly attention.

4. Dust all ornaments and gas globe, and place on a tray outside the room.

5. Brush mattress and dust bedstead.

6. Make the bed and cover with a large dust-sheet.

7. Shake and pin up any valances or curtains, shake and remove short muslin blinds.

8. Shake and fold up all toilet covers, etc., remove fenders, fireirons, etc.

9. Cover the large pieces of furniture after dusting with dust-sheets. Dust and remove chairs.

10. Dust each side of blind (each lath, if Venetian), pull up as high as possible, and cover with dust-sheet or paper. If the grate has been used, remove cinders, ashes, and soot before attending to the blind.

11. Sweep the ceiling, cornice, and walls with a Turk's-head mop, or a long hair broom covered with a clean duster.

12. Sprinkle one strip of carpet with clean-drained tea leaves, and shut windows.

13. Sweep the carpet with a long-handled carpet whisk towards the fireplace (unless this is contrary to the pile), sprinkling and sweeping in strips till the whole is clean (being careful to burn the leaves and dust), and afterwards sweep the wooden surround with a hair broom.

14. Open windows, leaving door closed for dust to settle.

15. While waiting, shake rugs in the open air, clean fender, wash globes, etc.

16. Dust and blacklead grate, using a hearth-cloth.

17. Dust first the highest things, such as windows, door frames, etc.

18. Remove dust-sheets carefully, shake them in open air, fold, and put away.

19. Rub wooden surround with damp rubber, dry duster, and floor-polish.

20. Well rub the furniture, using furniture cream if necessary.

21. Clean windows.

Every fortnight, if the carpet is old, after sweeping it should be rubbed over with a clean leather squeezed out of water containing a little vinegar and dissolved borax; the paint should also be washed.

DAILY WORK OF A KITCHEN

When cleaning the kitchen let the fire be as low as possible, as it is difficult to clean a hot stove.

1. Cover the dresser with a dust-sheet.

2. Pile the chairs on the table, and shut the window and doors.

3. Sweep from the door and walls to the hearth.

4. Brush the dust from the fender, and take up all cinders and ashes; sift the cinders and reject the ashes.

5. The stove must be brightened with Enameline, as, if hot, the blacklead dries before the stove can be polished. Clean all steel parts with emery-paper, brickdust, or ashes.

6. Wash the hearth, and use hearthstone if it is to be whitened.

7. Polish the fender, and replace.

8. Scrub the table, and, if the kitchen has been much used, wash the floor, first removing dust-sheet from dresser, and dusting the articles on the chimney-piece and the furniture.

9. Replace chairs, etc.

Once a week, at least, the flues should be thoroughly cleaned (see Chap. IX.), the china removed from the dresser, the shelves wiped first with a damp then a dry cloth, the tins, brasses, coppers thoroughly cleaned and polished, the walls swept, the paint washed, and the windows cleaned.

KITCHEN FLOORS, TILED OR FLAGGED

1. Sweep with a hair broom till free from dust.

2. Wash a portion with hot water and soda, using a floor-flannel.

3. Scrub this piece with a bass scrubbing-brush and scouring-soap.

4. Rinse and wipe the soap off.
 5. Wipe as dry as possible with a dry flannel. Continue piece by piece until the whole floor is clean, always commencing at the part farthest away from the door.
 6. Floors may be kept in a state of high polish by rubbing them at this stage with a cloth dipped in milk.
- On flagged floors many people make a border round the wainscoting with hearthstone.

TO REMOVE GREASE FROM STONE STEPS OR KITCHEN FLOORS

Make a paste of fuller's earth and water, cover the grease-spots, allow it to remain for twenty-four hours, and wash off. Repeat this treatment if necessary.

WEEKLY TURNING OUT OF A SITTING-ROOM

1. Collect apparatus, dust all small ornaments, and place them on a tray on a table, or remove from the room.
2. In the open air shake antimacassars and table-covers, and fold them.
3. Strong cushions may be beaten gently with a cane carpet-beater; roll up all rugs, and shake or brush them out-of-doors.
4. Beat and brush upholstered furniture; after dusting, remove it, if possible, from the room. Large pieces should be covered with clean dust-sheets; close windows.
5. Shake the curtains, pin them up, or place in curtain bags. Old pillow or bolster cases may be utilized for this purpose.
6. Lower the blind, well dust both sides of it (if a Venetian, each lath should be dusted separately), roll up as high as possible, and cover with paper or a dust-sheet.
7. If there has been a fire in the grate, lay down hearth-cloth and remove cinders, ashes, and soot; remove fender and fire-irons.
8. Sweep ceiling, walls, and cornice with a long-haired broom covered with a duster.
9. Sprinkle one strip of the carpet with clean-washed and well-drained tea-leaves.

10. Brush the carpet strip by strip with a whisk the way of the pile (towards the fireplace, if there is no pile or joining to be considered), collect dust in a dustpan and burn. If there is a wooden surround it should be swept with a hair broom.

11. While the dust is settling, the smaller pieces of furniture, which were removed from the room, may be polished, the fender and fire-irons cleaned, and the globes washed. Open window, and keep door shut.

12. Blacklead and polish the grate.

13. Remove carefully the dust-sheets, shake in the open air, and put them away in the housemaid's cupboard.

14. Dust and polish the larger pieces of furniture ; dust the wainscoting, rub the surround with a damp rubber and a dry duster, and then polish it.

15. Clean windows, replace and drape curtains.

16. Bring back and replace knick-knacks.

DUSTING

When we remember that dust is composed of small particles of sand and soil, soot from inside and outside our houses, particles worn off our clothing, particles of dry skin, dry sputum (often containing germs of fever and disease), we see how necessary it is that it should be removed daily.

RULES FOR DUSTING

1. Always dust the highest things first, as any loose dust falling down may be removed from the lower things afterwards.

2. Work methodically from a given point right round.

3. Gather up the dust, not whisk it from place to place, dusting as quietly as possible.

4. Keep the duster folded in a large flat pad ; ends are apt to scatter the dust and cause accidents to small ornaments.

5. Occasionally shake the duster in the open air.

6. Always use the dusters provided for their respective purposes.

7. For furniture or paint use two dusters, because (1) this prevents finger-marks ; (2) a good worker can use one hand, then the other ; (3) a certain amount of work is done by simply holding the furniture with a duster.

8. After use, dusters should be shaken in the open air, folded neatly, and put away. Clean ones should be given out weekly.

METHOD OF DUSTING A ROOM

1. Carefully wipe dust off the largest pieces of furniture ; for carved parts use a soft hair brush.

2. Dust all the ledges and rims of the chairs, beginning at the top and working downwards, pulling a corner of the duster through any small space.

3. Use a feather brush for the tops of pictures, and rub the glass with newspaper or a soft old duster.

4. Use a feather brush also for the tops and backs of books.

5. Dust all ornaments on the mantelpiece with a soft duster (old silk handkerchief, if available), and put them on the table ; then dust the top and sides of the overmantel and mantelpiece, and replace ornaments.

6. Lastly, wipe the wooden surround with a damp rubber, and then with a dry duster.

REMEMBER to dust legs of tables, all ledges, windows, chandelier and globes, skirting-boards, the whole of the door, the framework of the door when open and shut, and the grate.

DUSTERS

Very old sheets which have been cut down and mended, and are no longer suitable for beds or cots, old print dresses, old aprons, old hangings, old cotton furniture-coverings may all be cut into suitable-sized pieces, hemmed, and used for dusters.

Dusters may be bought by the dozen from 1/3 upwards ; those at 3¼d. each are fairly strong.

Flannelette at 2¼d. per yard, or unbleached calico at the same price, makes strong and economical dusters. They should always be hemmed and marked, as this ensures more careful treatment.

Some people prefer dusters knitted in Strutt's unbleached cotton on large bone needles. They take up the dust, polish well, leave no fluff, are durable, and, being loose and open, are easily washed.

SPRING CLEANING

This is often a time of dread to those who have an inveterate hatred of the sound of a broom and scrubbing-brush. Much discomfort may be avoided by remembering the following points:—

1. Time may be saved by preparation.
2. The workpeople should be engaged beforehand, to prevent delay and prolonged upset.
3. It is a mistake to disarrange too many rooms at once ; always leave some comfortable refuge.
4. Never overtax mental and physical strength by attempting too much ; so plan that each day has only what can be accomplished without undue effort.
5. If the head of the house has a sanctum, it is better to clean it in his absence, if possible, in order that he may not see it in a state of upheaval.
6. It is a good plan to take advantage of the absence of some of the members of a large family.
7. Make arrangements for comfortable meals to be served punctually.

Mention may perhaps be made here of the "Compressed Air" cleaning, in favour of which it is claimed that not only is the actual cleaning accomplished, but that all articles are purified and disinfected, by the enormous quantity of air pumped in. The price for cleaning is as follows :—

Carpets and rugs from 2*d.* per square yard.

Large couches from 4/-, small couches from 2/-.

Easy-chairs from 6*d.* to 2/-.

Mattresses from 2/-.

Pillows and bolsters from 3*d.* each.

Curtains from 1/- per pair.

PREPARATION

1. Turn out all drawers and cupboards, scrub the inside with carbolic soap, sponge the outside with vinegar and water if it be polished, dry with a cloth, and, when possible, set in the open air to dry. Rubbish should be disposed of ; winter garments brushed and put in the open air some hours to freshen,

then folded neatly with something to keep away moths. When dry, re-line the drawers and shelves with paper, and replace their contents.

2. Winter curtains should be taken into the open air, well shaken and brushed, and hung over a line for a few hours ; then folded carefully with Russian-leather parings, black pepper, turpentine rags, or blocks of camphor between the folds ; wrapped in an old sheet, and sewn up carefully, so that there are no spaces through which a moth could find its way.

3. Blankets should be well shaken, washed, and wrapped up in the above manner. If the day is warm and sunny, the mattress, pillows, and bolster should be taken into the open air, beaten with a cane carpet-beater, well brushed, and left to freshen. The covers of the wire mattress, the holland or calico mattress-slips, pillow and bolster undercovers, should be washed and ironed.

4. Take down pictures and mirrors, and clean as directed in the chapters on those subjects.

5. Dust and wash all ornaments, attend to the books ; clean cornice and curtain-poles, if removable.

6. Lay in a good stock of all cleaning materials, and have a sufficiency of floor-flannels and cloths.

METHOD OF CLEANING

The principle in all cleaning is to dust each thing before removing it from the room to be cleaned, then burn all the loose dust. Commence at the top of the house and work downwards, finishing with the kitchen and offices.

1. Take the carpet up and fold by seams ready for shaking ; have it brushed, beaten, and shaken, and ready to re-lay when required.

2. Have chimneys swept.

3. If necessary, have the ceilings papered or white-washed ; if not, brush with a ceiling-brush or Turk's-head mop. If the wall-papers are very soiled, and it is not convenient to have them newly papered, they should be brushed with a soft hair broom covered with a clean duster, changing it when soiled ; or they may be cleaned by rubbing downwards very lightly with a dough made of flour and water, or by some crumbs of bread.

4. Take down the blinds, if Venetian, wash each lath, following the directions for washing paint. Fancy glazed blinds may be laid on a table, dusted, and cleaned with crumbs. Holland blinds, if very dirty, should be taken off the rollers, washed (after dusting) by gently squeezing in lukewarm soap lather, starched in stiff hot-water starch, and ironed.

5. The furniture must be washed with vinegar and water, and dried, first moving the smaller pieces into another room, and covering those which must remain with dust-sheets.

6. After the floor has been swept, the paint should be washed, the mantelpiece washed and polished, and the windows cleaned.

7. Scrub the floor, leaving door and window open to make it dry quickly.

8. When quite dry, re-lay the clean carpet, treating it with oxgall if necessary (see Chapter XII.).

9. Bring back and polish furniture, replace pictures and ornaments, and put up clean curtains.

THE HOUSEMAID'S CUPBOARD

To prevent friction between maids, it is wiser, when possible, to give a definite place to the housemaid for the keeping of all her requisites. As the larger portion of her work (in a small household where a cook is her only fellow-servant) lies upstairs, it will be convenient if a cupboard or small room can be allotted for this purpose on the first or second storey. An ideal cupboard should contain a sink fitted with hot and cold water and a draining board, in order that bedroom bottles, ware, etc., may here receive their weekly washing, and water obtained for the filling of jugs. It is not always convenient for a maid to enter the bathroom. A shelf should be provided for the accommodation of hot-water cans, so that when emptied these may be turned upside down to drain, thus preventing rust and speedy leakage.

A table is of the greatest use, as on it toilet-table silver may be cleaned, brushes washed, sponges attended to, clothes brushed, etc.

In this room everything which is necessary for the weekly and daily cleaning of the rooms should be at hand, such as

dust-sheets, curtain bags, mattress brush, dustpan and brush, carpet sweeper, carpet whisk, floor flannels, wash leather, furniture cream, floor polish, salt, soap, etc. The housemaid's pail, after being carefully washed and rinsed, should be kept in a secluded place in the open air, and not in the house; ware cloths after attention should be dried in the open air if fine, but if a small clothes horse or rail is placed near to the window, it will be found most useful for drying these cloths, also damp floor flannels, when the day is wet.

On the door may be hung a plan of the work which is expected of the maid, the special time of her allotted duties, and an inventory of the various utensils, etc., provided for her use.

HOUSEMAID OR BUTLER'S PANTRY

This room is provided for the work of the butler, parlour-maid, or housemaid, according to the number of servants forming the ménage, and is usually adjacent to the dining-room. Here should be provided a sink fitted for the washing and draining of glass, silver, and tea-service china (the greasy china being probably attended to in the scullery).

Plate baskets, polished wooden cases or canteens, will be required here for the silver in which should be a written list of all plated or silver articles, so that the contents may be counted over daily, and anything mislaid or lost be noted at once.

Cupboards with sliding glass doors, the shelves of which are edged with hooks, will be necessary for the glass and china, as probably dessert service in addition to tea services will be kept here; complete lists of both glass and china should be at hand.

A table whereon silver may be cleaned, flowers arranged, menus written, salt cellars and cruets re-filled, etc., is a necessity. Amongst the requirements of the pantry are a good supply of tea and glass-cloths, chamois leathers, plate brushes and silver-cleaning materials, dish-cloths, bottle brush, soap, soap jelly, salt, mustard, vinegar, salad oil, scotch hands, flower vases, scissors, a rail for drying tea-cloths, etc.

There are sometimes slight differences between a scullery sink and that placed in the housemaid's pantry.

1. The scullery sink is often of rougher ware with a ware drainer, as the china washed here is usually stronger and thicker. In the housemaid's sink a wooden drainer is usually provided for the more delicate china and glass.

2. A plate rack is frequently fixed over a scullery sink so that dishes and plates may dry without wiping. The more dainty china is carefully wiped with soft tea-cloths and put away immediately.

3. The water from a scullery sink enters (in many cases) into a gully trap containing a grease trap. This trap is removable, and may be frequently thoroughly cleansed to prevent the accumulation of grease which might otherwise occur owing to the greasiness of the breakfast and dinner china which is here washed.

CHAPTER XXVII

Laundry Work

Materials—Utensils—Necessary Care—Hints on the Management of a Family Wash—Reasons for the Various Processes in Washing.

MATERIALS USED IN LAUNDRY WORK

SOFT water is best for laundry work, because it more quickly dissolves soap and forms a lather, and more quickly loosens the dirt and stains in clothes.

Rain-water is the softest, and in the country, where it is clean, should always be used when procurable ; but in towns, when full of smoke and soot, it would make the clothes dirty and discoloured.

Water is made hard by the presence of mineral salts ; soft water is free from these.

Well, spring, and mineral waters run through the earth, and as they pass along dissolve more or less the rock or soil they touch, thus acquiring mineral salts and becoming hard. Hard water requires a long time to make a lather, because the mineral salts unite with the fatty acid of the soap, and together form white curdy flakes which are called "lime soap." Until soap enough is used to overcome the salts in the water the soap will not dissolve, and can, therefore, have no cleansing effect before much of it has been wasted. If very hard, water can be softened by (1) being placed in the open air for some hours ; (2) boiling ; (3) the addition of soap ; (4) the addition of dissolved soda or borax.

SOAP is a compound of soda with fat or oil ; its cleansing effect is due to the soda ; but soda used alone would be so strong that it would prove injurious both to skin and fabric ; the mixture of fat prevents this. The best yellow soap should

be chosen, as cheap soaps contain either an excess of water, too much soda, or a preponderance of fat forming a greasy scum.

SODA is manufactured from ordinary salt, and has the power of dissolving grease and softening water. The frequent use of it tends to make white clothes grey and old-looking, but for coarse things it is invaluable. It should always be dissolved in boiling water before being brought into contact with the clothes, or it may make yellow marks, which in time become holes. It should never be used for coloured clothes or for flannels. It is advisable to keep it in a covered jar, because if exposed to the air it forms a white powder. (14 lbs. of soda can be had for 6*d.*)

BORAX is a salt found in California, and also prepared in Italy. It has the same power as soda, but not being so injurious can be used for fine things. It is employed in starch to give a gloss, and also to stiffen fine materials. (Powdered borax 2½*d.* per lb.)

STARCH is a preparation of rice, pulse, maize, wheat, and potatoes. The best for laundry work is made from rice, as the grains, being smaller, enter more easily into fabrics, and are more quickly burst by heat. Raw starch has no stiffening power. In hot-water starch the water must be actually boiling to cook and burst the grains; and for cold-water starch the iron must be hot enough to cook the grains and so make it stiffen. Starch stiffens, improves the appearance of linen, and makes it remain clean longer.

BLUE is made from an Indian plant named indigo, and also prepared from ultramarine. It is used to keep white clothes a good colour. As the linen is blued the water becomes paler, so that it is necessary to add a little fresh blue.

TURPENTINE is used in cold-water starch to prevent the irons from sticking. Care must be taken not to add too much, or the linen becomes yellow and smells unpleasantly.

WAX OR TALLOW. Either of these is added to hot-water starch for the above reason.

SALT added to water cools and hardens it, and thus tends to prevent colour from running. It helps especially to fix black, blue, and green. It is used in the rinsing water, 1 table-spoonful to 1 quart of water.

VINEGAR is used to revive colours which have faded through alkali in the soap used for washing. It is used in the same way and in the same proportion as salt.

AMMONIA is employed with melted soap for washing Jaeger and fine flannels, as it has a wonderful power of dissolving grease. It must not be used with hot water, as, being volatile, it flies off in the steam. Being a strong poison, it should be labelled, and kept in a glass-stoppered bottle, because it evaporates through a cork.

CARE OF UTENSILS USED IN LAUNDRY WORK

WASHING MACHINES are expensive, a good one costing from £2 10s. to £10; but they are most valuable for large washings and heavy articles, saving time and labour. They must, however, be thoroughly understood, as improper use will prove injurious to the linen. Dollies and pegs must be wielded carefully, and not used for fine things.

WRINGING MACHINES. Those with india-rubber rollers are best, as, being more yielding, they are less destructive to buttons. Manual wringing is apt to overstrain and tear fine things.

WRINGERS AND MANGLES. Everything must be folded evenly before wringing, and after use the screw should be loosened to remove the strain of constant pressure. Wooden rollers should be wiped dry, as otherwise they become soft and quickly worn out, and can only be replaced at great expense. The bearings should be kept clean and well oiled, the black grease removed by rags and a narrow brush dipped in paraffin; and fresh oil should then be applied with a quill feather, as a lubricant, to prevent the unpleasant creaking which, being caused by one part grating against another, hastens the wearing out of the machine.

TUBS should be made of wood, no nails being used in their manufacture, as then there is no danger of rust. Wooden utensils are also cheaper and more easily kept clean. The scum must be removed before it hardens, the tubs scrubbed the way of the grain, and clean cold water left in them to prevent shrinkage and leakage.

ZINC TUBS are more difficult to keep clean ; after use they must be well rinsed, dried, and left upside down to avoid dust and rust.

BOILERS are made of iron or copper. They must be left perfectly dry ; while warm, after use, they should be emptied and dried. Iron boilers are treated in the same way as galvanized baths (see Chapter XV.) ; copper ones are usually cleaned with soap and sand. Care must be taken that wet clothes are never allowed to rest on the brickwork round a copper, as the iron in the bricks often causes iron-mould. For this reason any nails in the boiler-lid should be covered with putty.

STICK. The stick must be smooth, to avoid tearing the clothes. Where the water is hard, and the boiler very old, it is wise to boil fine white clothes in a bag.

ROPE. If the clothes-line is made of hemp, it should be taken in after use, to avoid dirt and the danger of rotting through the variations in the weather. It should be wound round the hand and elbow, and placed in a cotton bag ; occasional boiling keeps it clean and white.

Wire lines should be carefully wiped before using.

CLOTHES PEGS. These should never be allowed to lie on the ground, but collected in a bag or basket. The best are those made of one piece of wood, not those with a tin band.

CLOTHES BASKETS should have wooden supports to prevent dust getting in through contact with the ground.

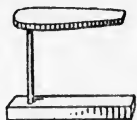
IRONING BLANKETS. These should have no joins ; old shawls or blankets may be utilized ; felt also is a suitable material. They should not be too soft, and should be fastened firmly to the table. If the table is slightly damped before placing the blanket, the steam (which will arise as soon as the hot irons are in use) will help it to adhere.

IRONING SHEETS. These must be scrupulously clean, and should, if possible, be without a join or patch, as the impression of these would be left on the linen when ironed. They should be tied down firmly with tapes to each corner leg of the table.

SHIRT BOARD. This should measure about a foot and a half in length and ten inches in width. It should be covered with a double piece of flannel tightly tacked on.

SKIRT BOARD. Five feet in length and width, graduating from a foot at one end to two feet at the other, is the usual size. It should be covered tightly with blanket and sheet.

SLEEVE BOARD. This, though not a necessity, is certainly a boon where many blouses or bodices are to be ironed. It is made of ordinary wood. The top is quite plain, and the board is one and a half inches thick, and five inches wide at one end, narrowing to two at the other. The support is about twelve inches high, and the stand ten inches long by two inches thick, the thickness giving weight and stability.



IRONS

1. **FLAT OR SAD** are the most common ; they cost less, require less fuel, and are easy to work with. They can be heated in front or on top of a coal fire, which should be stoked frequently to keep the fire up, putting on fresh coal at the back and pushing the red embers to the front. If heated over gas, as soon as the irons become warm they should be wiped, because the hydrogen of the gas, uniting with the oxygen of the air, produces moisture, which, if not removed, causes rust.

2. **BOX IRONS** are heated by a bolt, which is put in the fire, allowed to become red hot, and then put into the hollow iron. More fuel is thus used, as it is wasted while taking the bolt in and out of the fire, and much dust is made.

3. **CHARCOAL-HEATED IRONS** are sometimes used ; but the fumes are not healthy, and usually cause headache.

4. **GAS IRONS** are expensive, and a separate burner fitted with tubing is required for each ironer ; they are also rather cumbersome.

5. **GOFFERING IRONS** should be carefully heated ; if they become red hot they warp, and the outer coating of the metal peels off, leaving a rough surface, which is apt to cause fine lace to tear.

All irons must be kept thoroughly clean. They should be occasionally scrubbed with strong soda water and Monkey Brand soap, and then well dried by placing them on a warm stove. Each time they are used they should be cleaned on

a little finely grated bathbrick, rubbed on a coarse cloth, and then on a clean duster.

TO PREVENT RUST. If the irons are not to be used for some time, they should be slightly warmed, then rubbed over with mutton fat or tallow, which, when cold, forms a coating, thus excluding the air.

NEW IRONS sometimes stick, and should be seasoned as follows : warm the irons slightly, then coat with a mixture of one part castor oil to two parts paraffin ; allow the iron to get cold, and then repeat the process, scouring well before use.

POLISHING IRONS have a very smooth convex surface. They require a longer time for heating, and must be kept scrupulously clean.

TO REMOVE RUST the irons may be rubbed with sweet oil, which after two or three days may be removed with unslaked lime. Emery-paper, sprinkled with paraffin, makes a good rust-removing surface on which to rub the irons.

Nos. 4 and 5 are the most useful sizes ; No. 3 is convenient for very small garments ; Nos. 8 and 9 are best for table linen.

IRONING STANDS. Lids of jam-jars, or inverted circular potted-meat jars, are the cleanest form of ironing-stands, earthenware ones being easily washed.

IRONHOLDERS should be oval, not square, as the corners resting on the iron become burnt ; they should be covered with strong linen, as woollen material soon becomes charred. Old stockings form a good material for the inside layers, and an oval cut from the wrist of an old kid glove, stitched at intervals to prevent shrinking, acts as a non-conductor of heat to the hand.

CLOTHES HORSES should be kept well scrubbed. When they are very old it is well to coat them with white paint, as sometimes old wood produces discolouration in damp fine clothes.

A FEW HINTS ON THE MANAGEMENT OF A FAMILY WASH

It is important that one special day be set apart for this purpose, and that preparations be made the preceding day as here given :—

PREPARATION. 1. Collect all the soiled things and sort into piles : (a) table linen ; (b) body and bed linen ; (c) handkerchiefs ; (d) bedroom and bath towels, toilet-covers, linen aprons ; (e) muslins ; (f) kitchen and pantry towels, dusters ; (g) prints ; (h) flannels.

2. Remove stains, and draw rents together with needle and cotton.

3. Shake the dust from the flannels and roll them up.

4. Steep separately the piles of uncoloured things.

5. Prepare some soap jelly.

6. Three-parts fill the copper with water.

7. Lay the boiler fire.

8. See that every requisite material is in the house.

WASHING DAY

Early rising is essential. While the water in the copper is becoming sufficiently hot for other things, the flannels may be washed and hung out to dry before the sun becomes oppressive.

White things should be washed in order, commencing with the cleanest, *e.g.* table linen. The water in which it has been washed will be clean enough for the toilet-covers and towels, and afterwards it can be used for bed and body linen, and so on, finishing with the most soiled things. For very greasy things, such as oven-cloths and coarse aprons, which are the last to be treated, two tablespoonfuls of paraffin may be added to the water in the boiler, as it is very effective in dissolving and loosening grease.

When possible, everything should be dried in the open air, as it makes linen a better colour, and also freshens it. The main points in securing the good colour of white clothes are thorough steeping, careful washing, boiling, very thorough rinsing, cautious blueing, and drying in the open air.

DAMPING. The clothes should be damped the evening before the ironing day, if they are to be ironed in the morning, as it is essential there should be sufficient time for the damp to become even before ironing. If they become too dry they do not iron smoothly, and the result is not satisfactory.

AIRING. After ironing, the linen should be well aired,

(a) to ensure its perfect dryness and a good gloss ; (b) to prevent the wearer from taking cold ; (c) to prevent mildew.

The linen should be counted to see the list is correct, then carefully mended, and put in its proper place ; all house linen being placed at the bottom of its particular pile.

REASONS FOR THE VARIOUS PROCESSES IN WASHING

1. **STEEPING.** Every pile of white linen should be steeped in a separate tub for twelve hours in cold water ; if very soiled, a little soap may be added to the fine things, and a little soda (dissolved first in boiling water) to the kitchen things. Cold water is an energetic solvent, loosening stains and dirt ; and thus steeping saves time, labour, soap, and wear and tear of the fabric.

2. **WASHING** expels by means of friction, with the aid of soap, the dirt loosened by the previous steeping.

3. **BOILING.** All white cotton or linen goods should be boiled for twenty minutes or half an hour to improve the colour, and get rid of the loosened stains.

4. **RINSING.** After being taken from the boiler, the linen should be well rinsed, first in warm water, and then in cold, to remove the soapy water and scum. If all soap is not thoroughly rinsed away, the linen will become yellow, and the blue will not enter into those parts which retain the soap.

5. **BLUEING.** The object of this is to keep the linen white, and prevent it acquiring the yellowish tint that frequent washing and age would otherwise bestow. The blue water should not be prepared long before use, as the blue, being a powder, settles at the bottom of the tub, and is apt to cause streaks and spots on the linen. The water should be sky-blue in the hand : if too much blue is used it gives a dark shade, and spoils the colour instead of improving it.

6. **STARCHING** improves the appearance of white cottons and linens, and makes them keep clean longer.

7. Clothes must be evenly folded before wringing, or some parts will be bluer and stiffer than others, owing to the unequal pressure.

8. **DRYING.** Everything should be hung inside out, to

avoid smuts on the right side. Body linen should be hung by the thickest parts, that the water may drain out and the linen dry more quickly. Avoid stress on the edges and corners of large square articles by pegging them some inches from the corners. Allow the wind to penetrate so as to facilitate drying.

9. If the things are very dry they must be sprinkled before folding, in order that the mangle may more effectually smooth out the creases and rough places. Warm water is used for sprinkling things which have been starched in hot-water starch, and cold for other things. Articles should be folded selvedge to selvedge when possible.

CHAPTER XXVIII

White, Coloured, and Jaeger Flannels

Stockings—Blankets—Table Linen—Hot-water Starch—Body and Bed Linen—Handkerchiefs—Prints—Collars and Cuffs—Cold-water Starch.

WASHING WHITE FLANNELS

1. Shake outside the washhouse to remove dust.
2. Wash by squeezing and kneading gently in lukewarm soap lather.
3. Rinse very carefully in lukewarm water, removing all soap.
4. Wring tightly.
5. Shake to remove moisture and to raise the fibre.
6. Dry quickly.

COLOURED FLANNELS. These are treated in exactly the same way ; but if the colour runs, salt and vinegar should be added to the lukewarm rinsing water.

JAEGER FLANNELS. After the preliminary shaking, these should be steeped one hour in warm soap lather containing liquid ammonia in the proportion of one tablespoonful to two gallons of water ; after which they are treated like other flannels. The water should be warm, not lukewarm, or it will be cold before the hour's steeping is completed. The bowl should be covered to keep in the heat, and prevent the evaporation of the ammonia.

FOR ALL FLANNELS

AVOID (1) extremes of heat or cold ; (2) rubbing and the use of soda. **AIM** at quick washing and quick drying, but not in bright sunshine or very near a fire.

If flannels are not shaken before washing, the extra dust

requires more soap to remove it, and white flannels become a grey colour.

Rubbing entangles the little hairs composing the nap or fluff, and thus causes flannel to shrink and become hard. Too much soap or insufficient rinsing causes flannel to become felty and yellow. The wringing should be most thorough ; the longer flannels are wet the more liable they are to shrink. As heat causes shrinking, they must not be placed too near a fire ; if they steam the heat is too great, and they should be moved farther away.

When dry they should be ironed over with a cool iron to smooth the surface.

Art serge, nun's veiling, and woollen delaines are washed in the same way.

STOCKINGS. These are treated like flannels ; and must be washed first on the right, then on the wrong side, rubbing a little soap on the sole of the foot. Black stockings become green through being insufficiently rinsed, or dried in bright sunshine. They should be pegged up by the toe to dry.

TO SHRINK NEW FLANNEL. Steep in cold water two hours, then plunge into very hot water. The better way is to dispense with this shrinking, by making the garments large enough to allow for the slight shrinking which will in time take place even after careful washing.

BLANKETS. March is usually considered one of the best months for blanket washing. They should be well-kneaded and squeezed in warm soap lather containing ammonia, rinsed very thoroughly in two lukewarm rinsing waters ; then tightly wrung, well shaken, and hung in the open air to dry, and afterwards well aired.

They are sometimes bleached in an air-tight room by fumes of burning sulphur ; but this is rarely done in private houses.

Silk embroidery on flannel should be well pressed on the wrong side with a cool iron, putting an extra fold of blanket under the work to give a rounded appearance.

WASHING AND GETTING UP TABLE LINEN

1. Steep in cold water overnight to loosen stains and old starch.
2. Rub, wring out of the steeping water, and remove stains.

3. Wash in hot water, rubbing with soap.
4. Rinse in warm water to get rid of dirty water and scum.
5. Boil briskly half an hour to keep linen white.
6. Rinse in warm, then in cold water, till all soap is removed.
7. Blue and wring evenly.
8. Starch in hot-water starch, and wring evenly.
9. Dry, in sunshine if possible.
10. Damp evenly with warm water.
11. Fold and mangle slowly to make ironing easier.
12. Iron the right side heavily till dry with a hot iron to make the linen very glossy.
13. Fold in screen folds and air well.

Table linen, being cleaner than the other articles comprising the wash, should be washed first.

HOT-WATER STARCH

INGREDIENTS. One tablespoonful of white starch, two tablespoonfuls of cold water, a strip of tallow or wax candle, and half a teaspoonful of borax dissolved in very little boiling water.

METHOD. Mix the starch with the cold water till quite smooth, using the fingers; then add the candle; stir well, and while stirring, pour on just sufficient boiling water to cook the starch, and when it becomes clear and loses the opaque white appearance, add the dissolved borax. For table linen, take one-third of this starch and two-thirds additional warm water. Less starch may be used if serviettes are not to be folded in fanciful designs.

Great stiffness causes linen to wear out more quickly, and a very stiff serviette for ordinary use defeats its object. Tablecloths are folded with three central creases lengthwise; to avoid any other creases they should be rolled. Serviettes are folded in a screen fold of three lengthwise, this strip is again folded into three, taking care that the name is outside.

BODY AND BED LINEN

1. Steep overnight to soften stains and loosen dirt.
2. Rub and wring out of steeping water.
3. Wash in hot water, rubbing with soap.
4. Boil briskly half an hour.

5. Rinse well in warm and then cold water.
6. Blue.
7. If preferred, a little hot-water starch may be added to the blue water to ensure smoother ironing and slight stiffness of frills.
8. Wring evenly.
9. Dry in open air wrong side out.
10. Damp evenly.
11. Iron trimmings on wrong side first, and the large plain surface on the right side afterwards.
12. Air thoroughly to prevent wearer from taking cold, and to prevent mildew.

HANDKERCHIEFS. These should always be steeped in a separate tub. If the user has been suffering from a cold, add a little Sanitas to the steeping water. A little salt in this water makes the handkerchiefs less unpleasant to handle. After being rubbed in the steeping water, they should be well washed in hot water, rubbed with soap, then rinsed, boiled, again rinsed through two waters, blued, and hung in the open air to sweeten and freshen. They should next be dipped in clean cold water, folded in half, and mangled. Ironing while wet imparts a slight stiffness, which prevents their becoming crushed so quickly.

Very thin cambric handkerchiefs may be slightly stiffened by adding a small quantity of hot-water starch to the blue water.

PRINTS. Delicate cottons and prints should be treated as follows :—

1. Wash by gently kneading in lukewarm soap lather.
2. Rinse, to thoroughly remove all soap.
3. If a white ground, blue the fabric.
4. Starch in hot-water starch, and wring evenly.
5. Dry quickly, but not in hot sunshine.
6. Damp all over evenly with warm water.
7. Iron on the right side, unless the pattern is raised.

N.B.—If the colour is inclined to run, add 1 tablespoonful of salt and 1 of vinegar to each quart of rinsing water. If the print is a fast colour, it can be steeped in cold water for one hour before washing : dirty print dresses should thus be made easier to wash. Zephyrs, gingham, and Oxford shirtings have

the colours woven in, and will therefore stand rubbing and hot water.

In order to economise starch, the print may be dried before being starched ; but more time is necessary.

For prints the starch should be made according to the given recipe. Use an equal quantity of this starch and warm water ; or, in other words, use 2 quarts of the starch and 2 quarts of warm water.

STARCHING AND IRONING COLLARS AND CUFFS

1. The linen must be steeped, washed, boiled, rinsed, blued, and well dried before starching.

2. Dip in cold-water starch, squeeze out, and rub the starch well into the folds of the linen. Roll up in a clean dry cloth.

3. Rub with a dry rag before ironing to remove any starch, which, lying on the surface, would make brown specks when ironed.

4. Stretch the machine-stitching to pull out creases, and iron the wrong side lightly.

5. Iron the right side heavily to make the linen as smooth and glossy as possible ; then iron the right and wrong side alternately till quite dry.

6. With a damp rag rub evenly all over the right side.

7. Put the linen on a hard surface, and polish with a hot, clean polishing-iron.

8. Curl and air, or the polish will pass away. The best time for ironing is two hours after the linen has been starched, as, if ironed while too wet, the starch is apt to stick to the iron ; while if too dry there is not enough moisture to cook the starch when the hot iron passes over it.

The top edge of the collar should be next the ironer, so that any fulness can be pushed down to the bottom of the collar.

RECIPE FOR COLD-WATER STARCH

Ingredients :—1 tablespoonful of white starch.

$\frac{1}{2}$ pint cold water.

4 drops turpentine.

$\frac{1}{2}$ teaspoonful of dissolved borax.

METHOD. Put the starch into a clean basin, add very little of the cold water, mix with the fingers till free from lumps, add the turpentine (which mixes more easily than if added later), pour in the remainder of the water, and, lastly, the dissolved borax. The borax is dissolved in a tablespoonful of boiling water; if not dissolved it is apt to make yellow marks.

N.B.—If making a larger quantity, only 2 drops of turpentine should be added to each succeeding $\frac{1}{2}$ pint of cold water.

CHAPTER XXIX

Removal of Stains

Stains—Iron-mould—Mildew—Recipe for Scorch Mixture—Lime Mixture—Paraffin Washing—Alum Water—Melted Soap.

TEA AND COFFEE STAINS. These should be attended to while wet. Spread the stained part over a basin, and pour boiling water through until the mark has disappeared.

Borax or salts of lemon will remove dry tea stains ; but some teas, if once allowed to dry, become fixed dyes.

WINE AND FRUIT STAINS. While wet, sprinkle salt on the spot and pour boiling water through, or soak the stain for a few minutes in boiling milk. Salts of lemon will be found effectual for old stains.

IRON-MOULD. Pour boiling water through the yellow mark, lay on it a pinch of salts of lemon, then pour boiling water through again ; repeat this, as an old mark is usually very obstinate. Salts of sorrel or oxalic acid may be used in the same way.

WET INK-MARKS ON WHITE MATERIALS should be rubbed with salt and a piece of lemon as soon as the ink is soaked up. Rinse quickly, and repeat if necessary.

WET INK ON COLOURED MATERIALS. The freshly made ink stain may be removed by dipping and gently rubbing in milk that has been boiled, but is somewhat cooled, changing the milk as soon as it becomes inky.

PAINT STAINS. If on white cotton, it should at once be boiled, with melted soap and a little paraffin put in the water. If on coloured material, the spots should be rubbed with paraffin or turpentine.

MILDEW. Rub the spots with soap, then cover with scraped chalk, and allow the material to bleach on the grass, sprinkling it with water as it dries.

MIXTURE FOR REMOVING SCORCH-MARKS

Two ounces of washing soda, 2 ounces of fuller's earth, one onion, and $\frac{1}{2}$ pint of vinegar.

Peel, slice, and pound the onion, mix it with the other ingredients ; boil ten minutes, strain, and keep closely corked.

Spread a little on the scorched part ; when dry, spread more until the mark disappears.

LIQUOR TO REMOVE ANY STAINS ON WHITE MATERIALS

Quarter of a pound chloride of lime, 1 ounce of washing soda, 1 quart of boiling water. Mix these ingredients together, strain and bottle.

Use in the proportion of 1 tablespoonful to 4 of water, dipping the stain in the liquid. It must be washed off immediately, as it is very injurious to fabrics.

PARAFFIN WASHING

The value of paraffin as a detergent in laundry work was discovered many years ago by accident. As the clothes are put dry into the boiler, the preliminary steeping, washing, and first rinsing are dispensed with, thus saving time, soap, and labour. On the other hand, the smell is so persistent that rinsing through many waters and drying in the air are essential. There is also the danger of some accident, owing to the inflammability of the oil ; and the water in the copper must be changed very frequently, and time allowed for a fresh supply to reach boiling-point. These drawbacks appear to neutralize the advantages.

METHOD. Partly fill the copper with water, and shred thinly into it $\frac{1}{2}$ lb. of yellow soap. When the water is boiling fast, add $1\frac{1}{2}$ tablespoonsful of paraffin, put in the linen, and boil fast for half an hour. Fast boiling is essential, as otherwise the greasy scum adheres to the clothes. Rinse in several waters, and dry in the open air.

ALUM WATER

In order to render cotton draperies, window-curtains, and children's clothes non-inflammable, they should be rinsed in a solution of two ounces of alum to one gallon of water.

MELTED SOAP FOR SOAP LATHER

Shred the soap in very thin slices, just cover with water, and place the pan on the stove till the soap is quite dissolved, and a clear yellow liquid produced. A little of this added to water, and beaten with the hand, instantly produces a lather. Any scraps of soap from the bedrooms may thus be utilized. A large quantity should not be made, as it loses strength if kept many days.

CHAPTER XXX

Washing White and Coloured Silk

*Gum Water—Chiffon—Cretonne—Art and Madras Muslin—
Bran Water—Washing and calendering Chintz—Simple
Method of washing Lace—Black Lace—Ribbons—To
whiten Straw Hats—To Freshen Crape and Velvet—To
remove Creases.*

WASHING AND IRONING WHITE SILK

1. If very soiled, steep in cold water for a short time.
2. Wash gently in lukewarm soap lather without rubbing.
3. Rinse in cold water.
4. Blue it if the silk is a pure white.
5. Stiffen in gum water, using 1 teaspoonful of gum water to $\frac{1}{2}$ pint cold water.
6. Squeeze out as much moisture as possible, and roll the silk in a cloth until ready for ironing.
7. Iron the right side under a cloth till partly dry, then without a cloth till quite dry.
8. Iron the wrong side.
9. Fold loosely without ironing the folds, and air.

If white silk is steeped long, or washed in hot water, it becomes yellow; if rubbed or wrung, the fibres become strained and twisted. Where the silk is bright, the ironing should be done on the right side; but if of a dull nature, the ironing should be on the wrong side.

RECIPE FOR GUM WATER

One ounce of the best gum arabic to $\frac{1}{2}$ pint of boiling water.

Pour the water on the gum, stir occasionally till it is

dissolved, then strain it through fine muslin, and keep in a bottle any length of time.

COLOURED SILK

This is washed in the preceding way, only the steeping must be omitted, and the use of salt and vinegar resorted to if the colour runs.

Methylated spirit is often used to give a gloss to silk, in the proportion of 1 tablespoonful to 1 pint of cold water.

WASHING CHIFFON

Procure a wide-necked bottle, into which put some lukewarm soap lather and the chiffon, and shake until the water becomes soiled. When this occurs, change the water and shake until the chiffon no longer sullies the water. Rinse in cold water, and stiffen in cold water by using 2 teaspoonfuls of the prepared gum water to $\frac{1}{4}$ pint of water. Squeeze out, and roll in a cloth till it can conveniently be ironed. As the gum water is apt to make the iron stick, iron the chiffon under a cloth until partly dry, then without a cloth till quite dry; ironing along the selvages first.

CRETONNE

1. If very dusty, shake in the open air.
 2. Wash in lukewarm bran water without rubbing.
 3. Rinse in bran water, using salt and vinegar in the proportion of 1 tablespoonful of each to 1 quart of water if the colour runs.
 4. Wring tightly and roll up, with a fold of clean towel between each roll.
 5. Iron the wrong side with a heavy hot iron until quite dry, to prevent the right side from having a shiny appearance.
- Bran water absorbs colour, stiffens, and cleanses, so that no starching is necessary; and, unless the fabric is actually greasy, no soap lather will be needed.
- Art muslin, Madras muslin, and coloured embroidery on a cream ground should all be treated like cretonne.

BRAN WATER

Put one good handful of wheat bran in a saucepan over the fire, and cover it with 1 pint of cold water. After it has simmered half an hour strain through a cloth, and add to it 1 pint cold water, so that it may only be lukewarm when used for coloured fabrics.

WASHING AND CALENDERING CHINTZ

1. Wash, without rubbing, in warm soap lather.
2. Rinse in cold water, using salt and vinegar if necessary.
3. Dip into a solution of 2 teaspoonsful of powdered size to $\frac{1}{2}$ pint of boiling water.
4. Squeeze out the chintz, and roll in a cloth till it is convenient to iron it.
5. Iron it on the right side till partly dry.
6. Glaze it with a polishing-iron on a hard surface.

SIMPLE METHOD OF WASHING LACE

1. Steep, if white and very soiled.
 2. Wash in warm soap lather by rolling the lace between the hands.
 3. Rinse in warm and then cold water.
 4. If a pure white it should be blued.
 5. If preferred, stiffen slightly in thin hot-water starch, gum water, or $\frac{1}{2}$ pint water in which two or three lumps of sugar have been dissolved.
 6. Pin wrong side upwards on a board covered with flannel, and, when nearly dry, iron the wrong side with a fairly cool iron.
- Fine lace may be washed inside a bottle to prevent tearing and twisting.

Valuable old lace may be cleaned as follows: fold it, sprinkling dry powdered magnesia between each fold; leave it for some days, when the magnesia will be found to have absorbed much of the dirt. Cream-coloured lace should never be blued, or the colour will be spoilt.

GETTING UP BLACK LACE

METHOD I. Mix $\frac{1}{4}$ pint cold tea with 1 tablespoonful of gum water; dip the lace into this, squeeze it out, pin it on to a

flannel-covered board wrong side upwards, and, when nearly dry, it should be ironed. Black veils may be freshened in this way.

METHOD II. Roll the lace evenly round a large bottle, and dip it into stout. Press out some of the moisture ; leave the lace until dry, and then lightly iron the wrong side. The heat of the body, however, revives the smell of the stout, which is a drawback to this method.

RIBBONS. If soiled, these may be renovated by a gentle sponging with water containing a little ammonia (2 teaspoonsful to $\frac{1}{2}$ pint water). Spread lengthwise on a table, cover with a thin cloth, and iron until dry. The cloth prevents the glazed appearance which otherwise the ironing invariably produces.

TO WHITEN STRAW HATS. Hats which have become tanned by sunshine may be whitened by being scrubbed with a nail-brush dipped in 1 teacup of lukewarm water, containing $\frac{1}{2}$ teaspoonful of oxalic acid. To restore the glaze, when dry brush over with white of egg.

TO FRESHEN CRAPE. Brush the material thoroughly, then wind it round and round a large bottle. Allow this to revolve before the spout of a kettle full of boiling water so as to become well steamed, and then dry in a warm place.

TO RAISE VELVET PILE. Should the pile of velvet or velveteen be crushed, sponge the back with ammonia and water, only slightly damping the material. Hold the velvet firmly out between the two hands while a helper passes a warm iron underneath on the wrong side ; the steam thus produced raises the pile.

TO REMOVE CREASES. Iron carefully ; but if this alone is not effectual, iron the crease with a cloth, slightly dampened, placed between the iron and the creased fabric : the steam and pressure will remove the mark.

CHAPTER XXXI

Care of Clothing

Treatment of Silks, Muslins, Coats, Bodices, and Skirts—Men's Garments—Hats, Umbrellas, Mackintoshes—Removal of Stains—Cleaning of Gloves.

WINTER and summer clothes should never be kept in the same receptacle. At the end of each season they should be looked over, and what is unfit for future use, given away or otherwise disposed of. The remaining things should be well shaken, hung some hours in the open air to freshen, well brushed, carefully repaired if necessary, and put away for the next year.

Articles which require dyeing, washing, or cleaning should be either sent to the cleaners, or washed at home if this is sufficient. All cotton materials should be washed to extract any starch which, if left in, would cause the fabric to rot.

SILK DRESSES, after being worn, should be spread on a table and carefully wiped all over with a clean soft cloth.

MUSLIN AND COTTON DRESSES should be loosely folded and put away in a drawer ; if suspended, they are liable to lose their crispness and become limp and draggled in appearance.

COATS keep in better shape if hung on wooden suspenders, which can be purchased at 1½*d.* each. Hanging by a loop at the collar is apt to make them set badly.



BODICES, BLOUSES, AND WAIST-

COATS should be neatly folded, keeping them straight, and laid singly, if possible, in a deep drawer, or on a wardrobe-shelf, with tissue-paper or thin muslin placed on them.

SKIRTS should have two loops at equal distances, and the waist should be hooked. If each loop is hung on a separate peg, the skirt will be equally balanced, and no part will become tumbled, or the "hang" spoiled.

One skirt should never be hung over another or inside out, as either of these treatments results in an untidy garment.

For keeping best skirts, thin muslin bags which fasten down the front may be used.

Hanging before a fire sometimes removes creases from garments ; but a slight damping and ironing with a cool iron over paper is more effectual.

All clothes should, if wet, be well dried, as damp is the surest cause of mildew and creases.

MEN'S GARMENTS should be folded carefully. Trousers should be shaken, pulled out lengthwise, and well brushed. The use of "stretchers," or folding them in clean paper under a mattress, preserves them from becoming "baggy" at the knees.

Light, air, and dust all tend to turn men's black hats brown. Before and after use they should be well brushed with a soft narrow brush, which can easily enter the space between the head and the brim. The rough appearance, caused by partial wetting in a shower, may be removed if the damp is made uniform by dipping a hat-brush in cold water, shaking it well, then lightly passing it gently round the hat the way of the nap.

Bulges or indentations may be removed by steaming the hat over a jug of boiling water, and then, with a very small hot iron, pressing out the hollow from inside.

A hot brush renovates the gloss of a hat which, through use, has become dull.

Ammonia is useful for removing grease ; a flannel being dipped in a solution of ammonia and water, and gently passed over the soiled surface.

OTHER ARTICLES

If a hat or bonnet is to look fresh and dainty, it should always be brushed after use, as dust quickly gives a soiled, tawdry appearance. Where there are trimmings under the brim, the hat should be supported, and not allowed to lie flat.

Heels and toes of stockings should be well stretched and darned before use. When a stocking foot becomes very badly worn and uncomfortable through wear, it, if knitted, should be refooted by the use of wool and knitting-needles ; but, if finely woven, a new foot, cut from the upper part of another pair, should be substituted.

UMBRELLAS. It is a great mistake to open a wet umbrella to dry it, as the moisture causes the ribs to bend, and the umbrella will not close tightly when once warped. It should be turned upside down; otherwise the water will soak into the starting-point of the ribs, and the silk will rot. When out of use, it should be unrolled, or the folds will quickly split. An umbrella-stand is not a safe keeping-place for a good umbrella, as in haste another may be pushed through it.

MACKINTOSHES when wet should be shaken, and opened so that air can get to every part; otherwise they smell unpleasantly. Extreme heat from a fire will cause the material which joins the seams to melt. Mud stains may sometimes be removed by gentle rubbing with spirit of wine.

REMOVAL OF STAINS FROM CLOTHING. The stain should always be rubbed from the outer part towards the centre to avoid spreading it. As little liquid as possible should be used, and linen or flannel is necessary as a rubber, to dry thoroughly.

TO REMOVE WAX OR GREASE. Blotting-paper and a warm iron are useful, or diluted benzine may be employed.

PAINT. A flannel dipped in turpentine, paraffin, or chloroform, is efficacious while the paint is wet; if dry, equal quantities of turpentine and pure alcohol will probably assist its removal, by softening the paint. If a greasy mark is left, it should be treated with benzine.

GREASY COAT COLLARS (Black). These may be cleansed by the application of water containing a little ammonia.

CLEANING OF LIGHT KID GLOVES. The gloves should be rubbed gently, from the wrists to the finger-tips, with a flannel dipped in milk (using yellow soap if very soiled). While drying, the gloves should be pulled and stretched to retain their softness. Oatmeal or dry bran will clean gloves that are only slightly soiled.

WHITE GLOVES may be cleaned in the same manner by using benzine. Exposure to the open air is necessary to remove the smell.

BLACK KID GLOVES may be renovated by brushing the rubbed parts with a feather dipped in a mixture of equal quantities of the best black ink and olive oil.

WASHLEATHER GLOVES should be washed on the hands in warm soap lather containing a little ammonia, then taken off, and well pulled while drying.

CHAPTER XXXII

First Aid Treatment of Accidents

Burn or Scald—Insect Stings—Something in Eye, Ear, or Throat—Bruises—Cuts—Black Eye—Nose-bleeding: Internal Hæmorrhage.

BURN OR SCALD. Remove clothes from sound side first, cut them away, if necessary; any little bits adhering to the burn should be soaked off with linseed, olive, or sweet oil. Exclude air by dredging the wound thickly with flour, put on it a piece of linen rag dipped in any sweet oil, wrap it round with cotton-wool or flannel, and tie on with a bandage.

Carron oil, composed of equal parts of lime water and olive or linseed oil, should be kept in every household, as it is invaluable for a burn.

INSECT STINGS. If in throat, slowly masticate and swallow a piece of onion. If any other part, press a watch-key over the place so that the sting may be extracted; touch the place with ammonia, or water in which a little common soda has been dissolved, or the laundry blue-bag.

SOMETHING IN THE EYE. The eye should not be rubbed, as this only makes it dry and inflamed, and the matter becomes more difficult to extricate. Keep the eye closed a few minutes, so that the lachrymal secretion may wash the intruder into the nostril. If in the upper lid, lay a pencil on the surface and turn back the eyelid, removing the foreign body with a camel-hair brush or a corner of a handkerchief. If in the lower lid, pull down the upper by the eyelashes, allow the eye to open slowly, when the object will probably become entangled in the lashes.

If, after the removal of the object, the eye is inflamed, drop in one or two drops of castor oil. If the object cannot be removed by home treatment, let a doctor see to it without delay.

If any lime should get into the eyes, bathe them at once with vinegar and water, and then with warm water.

SOMETHING IN EAR. If an insect, it should be syringed out with warm water ; if anything that will swell, such as a pea or bean, it should be withdrawn with a loop of silver wire.

BONE IN THROAT. Sometimes eating a piece of thick dry bread will push the bone downwards. In this case, be careful to give only solid food, and no aperient, because if the bone is coated with food it will probably pass away without injuring the intestines. If anything goes the wrong way, and is not coughed up immediately, the patient should at once be propped up, standing on his head, and his back violently smacked. This vigorous treatment is often successful in expelling the intruding object.

BRUISES. Where the skin is unbroken the bruise should be painted over with arnica ; but never when broken, as it may cause erysipelas. If no arnica is at hand, butter or sweet oil allays pain and helps to prevent discolouration. In severe bruises, hot fomentations and bran poultices, over which vinegar has been sprinkled, give relief when the skin is unbroken.

CUTS. Get rid of any broken glass or dust by squeezing cold water from a sponge over the cut. Bring the edges together by strips of diachylon sticking-plaster, leaving space to allow of escape of any suppuration from the wound. Over this put a pad of lint or linen, soaked in olive or carbolic oil, and secure by a neat bandage.

BLACK EYE. Massage excites absorption of blood and so prevents discolouration. Hazeline, applied with a piece of lint, or linen rag dipped in a lotion consisting of one part spirit of wine to eight of water, is very soothing.

NOSE BLEEDING. Place patient on a chair, sofa, or bed, with the head raised and the arms above the head. Apply ice or cold water to the nose and forehead. Syringing out the nostrils with a strong solution of alum in cold water is useful to arrest the flow.

TOOTH SOCKET BLEEDING. Clean out any clot, and push a plug of cotton-wool, dipped in strong alum water or glycerine, down into the socket ; then keep up the pressure by an additional plug in the opposite jaw.

INTERNAL BLEEDING. If the hæmorrhage is in the lungs, the blood will be bright, frothy, and will be coughed up.

TREATMENT. Lay patient on his back in a cool room, with the shoulders slightly raised. Give ice to suck, or very cold water with a teaspoonful of dry salt.

If the hæmorrhage is in the stomach, the blood will be very dark, thick, and clotted, and will be vomited up. The treatment is the same ; only administer vinegar instead of salt. Any form of bleeding may be stopped immediately by the application of adrenalin. Witch hazel, hazeline, or Friar's balsam are also useful for this purpose.

FAINTING. In a crowded building fainting may usually be prevented if, when the attack is coming on, the patient will bend his head below the knees, keeping it in that position for a short time. After this the patient is usually so far recovered that he can walk into the fresh air.

A fainting patient should be laid on his back with his head lower than his feet, strong smelling-salts should be applied to the nostrils, which may also be tickled with a feather ; the clothing round the neck and upper part of the chest should be loosened, and the face and chest sponged with cold water.

This treatment is usually effectual ; but in an obstinate attack, hot bottles may be applied to the feet, and a douche of water applied to the head.

HYSTERICIS. Light diet, warm clothing, early rising and early retiring, and plenty of occupation are the best general treatment. During a fit of hysterics, the patient should be addressed sharply, no sympathy being offered, but a douche of cold water promised, and perfect solitude granted.

CHAPTER XXXIII

A Few Hints on the Care of Infants

*Washing—Dressing—Care of Bottles—Food—Quantities—
Common Ailments.*

REQUISITES FOR BATHING A BABY once in 24 hours. Hot and cold water, bedroom basin, two soft towels, four small pieces of cotton-wool, a small piece of linen, little piece of tow, white vaseline, boric solution, sterilized scissors, mackintosh apron, and flannel apron. The clean clothes should be put in the required order, and aired on a chair in front of the fire.

During the washing the nurse should be in a warm place, protected from all draught, so that the infant may not take cold during the time its body is exposed, which time should always be as short as possible ; 15 minutes only being necessary for the undressing, washing, and dressing when undertaken by an experienced nurse. The nurse's sleeves should be rolled up, as it is quite possible for them to have come into contact with something of a septic nature. The water should be about 95° Fahr. ; if no thermometer is near, the heat should be tested by the elbow of the nurse, not the hand.

METHOD OF WASHING. Put 1 tablespoonful of the boric solution into a cup, adding to it sufficient hot water to make it warm. Lay the baby (undressed, but covered with a warmed dry towel) on its back ; dip one of the small pieces of cotton-wool in the prepared boric solution, and allow a drop to fall gently in one of its eyes, wiping it carefully with another piece of wool : then use the two remaining pieces in the same way on the other eye ; and so, by the use of separate pieces for each eye, guard against the danger of ophthalmia. Wipe out the mouth carefully (roof, gums, and tongue) with the small piece of linen to prevent "thrush," which is a fungus produced by

milk being allowed to remain on the tongue, and to become sour. First wash and carefully dry the face, using no soap ; then with a clean, soaped flannel wash the head and ears, rinsing and drying thoroughly. Next soap the whole of the body (with the flannel) and put the infant in a sitting position in the basin of water, supporting it with the left arm across its back and under its armpit, and rinse it all over with great care ; then thoroughly dry the child, paying special attention to the neck and groins.

Commence dressing by putting on the flannel binder, which passes twice round the child—somewhat firmly round the abdomen, but looser round the chest, in order not to impede the breathing. Sew this down the back with a few stitches, the child meanwhile lying on the face. Rub the buttocks with vaseline or lanoline (no powder being used, as this in becoming wet, cakes, and then chafes the skin) ; put on the woollen vest, which should be open right down the front, or, if no vest is used, put on the tiny lawn shirt, pleating it to the size of the back. In cases where a baby can have every necessary attention powder is by many people still used. For this purpose boracic powder, Fuller's earth, Talc powder, or equal parts of starch and oxide of zinc are to be recommended, and may be applied with cotton wool, which is cheaper than a puff, and can, therefore, be changed more frequently. After this comes the back petticoat (made preferably of flannelette, as its use is merely to protect the flannel barracoat, which would deteriorate with too frequent washing) ; next arrange the back of the barracoat, or long flannel, tacking down, with a few stitches, on to it the flap of the white lawn shirt (if worn). Thus far the garments have all been put on with the baby lying on its stomach ; but now turn it on to the back, and arrange the front of each garment, stitching a small binder well up to the neck to keep each garment in place. If the bodice part of the barracoat comes high up this is unnecessary. Turn up the barracoat to keep the feet warm, fastening it to the front if a boy, and to the back if a girl. Finally, draw the little day-gown on from the feet upwards (never over the head, as that is injurious to the eyes) ; and tie the sash in front, to prevent the baby from lying on the knot. A bib will probably be necessary.

WASHING OF A BABY'S CLOTHES

Soda or washing-powder should not be used for any article of clothing worn by a baby, as the alkali would chafe and irritate the skin. For the same reason, lace trimmings should not be starched.

CARE OF BOTTLE

Where feeding in this manner is necessary, great care is required in the treatment of the bottles. Avoid any which have a tube, as it is most difficult to ensure perfect cleanliness. The slipper or boat shape, with a rubber nipple at one end, is the best. Wash the bottle and teat in hot water and soda after each feeding. Two bottles are necessary : one in use, and the other to be kept steeping in cold water till required, using them alternately. Twice daily they should be sterilized, by putting them into cold water and bringing it up to boiling-point.

FOOD

For the first day or two very little food is necessary ; some nurses think it advisable to give only a teaspoonful of warm water at intervals.

During the first month a baby should be fed every two hours, giving 3 tablespoonsful at a time, of 1 part milk to 2 parts water, sweetened with a little sugar or "sugar of milk" (obtainable at any chemist's), and adding a teaspoonful of cream.

When it is impossible to procure cream, half a teaspoonful of cod-liver oil may be added, as a proper amount of fat is most essential to keep up the heat of the body, and prevent rickets. If the child is troubled with much sickness, a tablespoonful of lime water may also be included. As the child becomes older more food can be given at a time, and at longer intervals. At the end of nine months saliva will be present, and patent starchy foods can be gradually introduced into the diet. The ptyalin in the saliva will transform the starch into grape-sugar, in which form it can easily be digested.

BARLEY WATER is most useful when the child is crying from thirst and not hunger. It is prepared as follows : Put

2 teaspoonsful of pearl barley in 1 pint of cold water (after thorough washing), and allow it to simmer until only two-thirds of the water remains, and then strain through muslin. This must be made every day; even twice a day in excessively hot weather.

LIME WATER. Sprinkle a little water on a piece of freshly burned chalk or lime about the size of an orange, and, when slaked, put it in a gallon jar, and fill it up with water, corking and shaking it. After it is settled, throw away the liquid. Fill it once again with water, shake, and leave it again to settle for twenty-four hours, when it will be ready for use. This will remain in good condition for quite three weeks.

During the first and second months a child should be fed every two hours, making a total of ten feeds in the twenty-four hours; two of these being given at night between 10 p.m. and 7 a.m. During the third month nine feeds should be given in the twenty-four hours, one only during the night, and the remaining eight at two-and-a-half-hour intervals during the day. From three to five months seven feeds should be given during the same time, one during the night, and the remaining six at three-hour intervals during the day. From five to twelve months six feeds should be given at three-hour intervals during the day, but the night feed should be entirely discontinued.

To each feed should be added from $\frac{1}{2}$ to 1 teaspoonful of cream or virol, according to the need for fat, and from $\frac{1}{4}$ to $\frac{1}{2}$ a teaspoonful of milk sugar (4 ozs. for $3\frac{1}{2}$ d.). This milk should then be sterilized by being placed in a covered jug in a saucepan of cold water, the water coming up to the level of the milk. After being heated very gradually the water should boil for forty minutes, and then the milk should be kept in a cool place until required.

The proper temperature for the food is $98\frac{1}{2}^{\circ}$ Fahr. or "blood warm." Catarrh of the stomach is liable to arise if the food is too hot; and if too cold, digestive disturbances are set up. In cases where milk and water are found difficult of digestion Allenbury's food, humanized milk, or albulactin may be tried (the last sold in 1/3, 2/6, or 5/- bottles).

When a baby reaches the age of seven months a little juice from a freshly cut joint (not flour gravy) may be tried; at eight

months a few crumbs may be added to this meat juice, or a very little floury potato. From nine to eighteen months the yolk of a lightly boiled egg, or a little bread dipped in bacon fat, mutton broth, or bread and butter, may be introduced into the dietary.

From one year to eighteen months five meals should be given per day, at 7 and 10 a.m., 1.30, 5 or 5.30 and 10 p.m. Between eighteen months and two years the last meal should be omitted, and at this period a little fish or minced meat may be included in the menu ; but no tea, coffee, alcohol, or "made dishes."

To judge whether a baby is thriving or not it should be weighed weekly. It loses weight during the first three days of its life, but at the end of the first week it should equal its birth weight. During the first three months it should gain six ounces a week, but after the end of its first year only one and a half to two ounces a week. If the increase is excessive it may be due to overfeeding which may result in convulsions.

QUANTITIES SUITABLE FOR A HEALTHY CHILD

Age of child.	Milk.	Water or barley water.	Amount for each meal.
1st fortnight	1 tablespoon	2 tablespoons	3 tablespoons
2nd " "	2 " "	3 " "	5 " "
2nd month	2 " "	3 " "	5 " "
3rd " "	4 " "	4 " "	8 " "
4th " "	5 " "	4 " "	9 " "
5th " "	6 " "	4 " "	10 " "
6th " "	8 " "	4 " "	12 " "
7th " "	9 " "	4 " "	13 " "
8th " "	10 " "	4 " "	14 " "
9th " "	12 " "	4 " "	16 " "

COMMON AILMENTS

FLATULENCE AND COLIC. These often accompany each other, and give rise to much discomfort. A very small teaspoonful of castor oil or a little dill water usually brings relief, especially if meanwhile the abdomen is gently rubbed with a warm hand.

TO ADMINISTER CASTOR OIL. For a very young baby

the best plan is for the nurse to dip her finger in the oil, and let the child suck it, continuing till the full amount is given.

DIARRHŒA while teething is not necessarily harmful ; but if excessive, a small dose of castor oil may be given.

CONSTIPATION. For this evil castor oil may be given (1 eggspoonful) ; but if resorted to regularly it tends to greatly aggravate the trouble. Soap suppositories are efficacious, but should not be allowed to become a necessity. One eggspoonful of orange or grape juice given daily is most valuable, so too is olive oil (unless it causes sickness), an eggspoonful to be given daily to an infant, one teaspoonful to an older baby. Daily massage of the abdomen is also helpful.

CROUP, which is distinguished by its sudden appearance, loud and shrill breathing, and crowing, brazen cough, is most alarming. A teaspoonful of ipecacuanha wine should be given in a little sweetened warm water, and the dose repeated until the child is sick. Meanwhile a sponge wrung out of very hot water may be applied to the throat, or the feet put in mustard and water ; or, preferably, the child may be placed in hot water, and a large poultice of linseed meal, with a sprinkling of mustard, applied to the upper part of the chest and throat. It is a good plan to keep a kettle steaming in the room, as it is necessary to guard against bronchitis.

CONVULSIONS. This fit is often the result of some error in diet. The child should at once be put into a hot bath, or cloths should be wrung out of hot mustard and water and applied to the feet, legs, and abdomen. When swallowing is once more possible, a small dose of castor oil should be given.

While **TEETHING**, a baby's mouth should be kept scrupulously clean by washing with a little borax and water after every meal, the gums being rubbed with a finger dipped in borax and glycerine. When the mouth is hot and feverish a drink of cold water may be given occasionally.

RICKETS. This condition is caused sometimes by insanitary surroundings, but far more frequently by improper feeding ; the elements essential to nourishment and easy digestion being deficient. The signs of this condition are : (1) The fontanelle does not close as it should do after the age of six months ; (2) The tardy appearance of the teeth of which the two lower front ones should come at the age of six months ;

(3) The child is very quiet and stolid ; (4) The arms and legs develop an excess of fat and a tendency to bend when the child is allowed to crawl or held in a standing position. Cod-liver oil is one of the most important remedies in the treatment of this complaint. Cold salt baths, open air, a liberal supply of creamy milk, and hygienic environment are all essential for its cure.

WEANING should take place gradually about the tenth month, but if possible not during July, August or September. Sterilized cow's milk should take the place of human milk, at first once a day, then twice a day, and so on till it is adopted entirely.

Dummies or comforters should not be used. They are a cause of diarrhœa, and at a later age of adenoids.

SUGGESTED DIET FOR A CHILD FROM TWELVE TO EIGHTEEN MONTHS

8 A.M. Oatmeal porridge and sterilized milk, or crisp toast and butter or Wallaclite biscuit, followed by drink of sterilized milk.

10.30 A.M. Drink of sterilized milk.

1 P.M. Lightly boiled egg and bread (not too new) and butter, or bread and meat juice gravy, or milk pudding, followed by drink of sterilized milk.

5 P.M. Crisp toast and butter or Wallaclite biscuit, followed by drink of sterilized milk.

9 P.M. Drink of sterilized milk.

A child of eighteen months may be given one of the following dishes for dinner :—Pea soup, fish, very small quantity of lightly cooked-meat with fat, boiled rabbit, chicken, or mashed potatoes, followed by milk pudding, suet pudding, or stewed fruit (neither seeds nor skin).

SUMMER DIARRHŒA

1. Send for a doctor at once.

2. Stop milk and food immediately ; give only luke-warm boiled water sweetened with a little sugar to drink during twenty hours ; give dose of castor oil.

3. Keep the child warm ; put on flannel binder and cover its legs and arms.

CHAPTER XXXIV

The Toilet

Cold Cream—Face Cream—Boracic Ointment—Boracic Lotion—To Soften and Whiten the Hands—Hand Lotion—Hair Lotion—To remove Dandruff—Eyelash Cream—Tooth Powder—Liquid Dentifrice.

WHILE emphasising the fact that health, cleanliness, and fresh air are the best of all cosmetics, yet after exposure to dust and intense heat of the sun (when motoring, climbing, or in sports of various kinds) certain preparations are often found to be healing and cooling. These may be made at home inexpensively, and of pure materials, and are often practically the same as those sold at much higher prices, when perfumed and placed in attractive tubes and jars.

COLD CREAM

	<i>s.</i>	<i>d.</i>
1 ounce white wax	3	
$\frac{1}{2}$ ounce spermaceti	1	$\frac{1}{2}$
5 ounces almond oil	1	4
$\frac{1}{4}$ teaspoonful of borax	—	
$2\frac{1}{2}$ ounces rosewater	3	
	<hr/>	
	1	$11\frac{1}{2}$

Put these ingredients into a jar in a saucepan of water, with the exception of the borax which is dissolved in the rosewater. Allow the contents to melt very slowly at gentle heat, then add the rosewater, mixing well together. A little perfume may be added if wished. Pour while liquid into small pots.

Cheaper cold creams are sold, their foundation being lard ; but animal fat has a tendency to produce the growth of hair on the face and is therefore not advisable. Almond oil has been noted for centuries for its beneficial effect upon the skin.

FACE CREAM

1½ ounces almond oil, 2½*d.* per oz.
½ ounce lanoline.
½ „ spermaceti, 2½*d.* per oz.
½ „ white wax, 3*d.* per oz.
½ „ witch hazel, 1½*d.* per oz.
½ drachm tincture of benzoin, 4*d.* per oz.
1½ ounces rosewater, 1*d.* per oz.

Melt the spermaceti, wax and lanoline together, and stir in the almond oil, which has previously been heated, then add the hazel and rosewater, gradually heating well between each addition, lastly the benzoin.

Constant and regular use increases the value of this skin food, a little of which should be rubbed in daily after washing the face with warm water and gently drying with a soft towel.

BORACIC OINTMENT

1 ounce vaseline or lard (if not for facial use), 2 dessertspoonsful of finely powdered borax or boracic acid. If lard is used it should be freed from salt, but if this is the basis the ointment will not keep good for long, as lard quickly becomes rancid. Mix the powder and the fat until the borax is thoroughly incorporated. Place in a jar, using a knife dipped into boiling water to render the surface smooth and even.

BORACIC LOTION

Dissolve 1 teaspoonful of boracic acid in 1 pint of water. This will be found useful for bathing sore or tired eyes, as a mouth wash, or for any sore or inflamed surface.

TO SOFTEN AND WHITEN THE HANDS

Mix together and cork securely equal parts of lemon juice and eau-de-cologne. After the hands have been washed in warm water and rinsed in cold and carefully dried, this refreshing scented lotion should be well rubbed in.

HAND LOTION TO PREVENT ROUGHNESS IN FROSTY WEATHER

1 ounce glycerine
2 ounces rosewater
 $\frac{1}{2}$ teaspoonful of boracic acid.

HAIR LOTION

$\frac{1}{2}$ ounce tincture of jaborandi
 $1\frac{1}{4}$ „ cocoa-nut oil
 $1\frac{1}{4}$ „ lanoline
2 grains of pilocarp hydrochlor.

These ingredients should be gently heated till the lanoline is liquid, well mixed, and bottled. This is sometimes of use in promoting the secretion of natural pigment or colouring matter, thus preventing the fading of the hair and the formation of dandruff.

TO REMOVE DANDRUFF

1*℥*. worth of quassia chips
5 ounces fluid ammonia
1 pint hot water.

Steep the chips overnight in the hot water ; next day strain, add the ammonia, and bottle and cork immediately.

This mixture should be vigorously rubbed into the scalp every alternate night.

EYELASH AND EYEBROW CREAM

$\frac{1}{2}$ ounce purest lanoline
 $\frac{1}{2}$ „ white vaseline
 $1\frac{1}{2}$ teaspoonsful oil of lavender.

Melt the two ingredients in a very hot basin, mix well, adding

the lavender while mixing. This is supposed to strengthen the growth of brows and lashes.

TOOTH POWDER

1 ounce precipitated chalk
 $\frac{1}{2}$ „ orris root
 $\frac{1}{4}$ „ castile soap.

Pound well in a mortar, mixing the three ingredients very thoroughly.

TOOTH POWDER.

One part camphor added to twelve parts of chalk. Precipitated chalk is the foundation of many tooth powders; the camphor is used as a disinfectant for the mouth and gums.

LIQUID DENTIFRICE

2 ounces finely powdered borax
2 teaspoonsful of tincture of myrrh, $4\frac{1}{2}$ d. per oz.
1 tablespoonful of spirit of camphor, $4\frac{1}{2}$ d. „
1 quart of hot water.

Dissolve the borax in the hot water, and when cool add the myrrh and camphor. Bottle and cork. Use 1 tablespoonful to 1 tumbler of water when brushing the teeth.

CHAPTER XXXV

Disinfectants

Origin of Disease—Germs—Essentials of a good Disinfectant—Carbolic Acid—Cyllin—Feyes' Fluid—Sanitas—Formalin—Formaldehyd—Sulphur—Perchloride of Mercury—Condy's Fluid—Formamint—Iodine—Zinc—Nitrous Acid—Fumes—Euchlorine—Public Disinfection—Washington-Lyon's Disinfectant.

WHEN we recall the dreadful diseases, such as cholera, plague, black death, and typhus fever, which raged in Europe throughout the Middle Ages, we cannot be too thankful that during recent years preventive medicine and the science of bacteriology have been successfully studied. The laws of hygiene too have been obeyed, and now in England zymotic diseases due to filth, starvation, and overcrowding, are practically stamped out. Scarlet fever, measles, and other ordinary epidemics are now treated so promptly and efficiently that the number of fatalities is enormously reduced.

The origin of epidemics is due to micro-organisms or germs, not by their mere presence in the body, but by their production through chemical changes (as they live and multiply) of certain poisonous substances which constitute the true infectants.

The microbes are divided into three classes—

1. Rod-shaped organisms known as bacilli.
2. Curved bodies called vibrios, or where several are linked together, spirilla, and
3. Minute spherical masses called cocci. These are so microscopic that 125,000 would have to be laid in a row touching each other to form a line one inch long.

The universe abounds in germs of all sorts, and we are

constantly exposed to their action, breathing into our bodies millions of them every day, but ordinarily if our blood is in good condition our bodies present a sufficient resistance to prevent them from doing any harm, while the good done by many of them is enormous, for it is by their direct agency that all dead organic animal and vegetable matter is finally resolved into simpler chemical products, which become available again in turn to serve as foods or nutrients for vegetation.

We, however, are dealing with the poison-producing germs which cause their respective diseases, as it is for these only that germicides are required.

DISINFECTANTS have a distinct and definite mission—

1. To quickly and entirely destroy the germ which is causing the poison.

2. To also kill the spores or immature germs.

ANTISEPTICS have not this definitely destructive power; their work is to prevent the multiplication of such disease-producing germs.

DEODORANTS merely mask or absorb certain undesirable odours and vapours which accompany the putrefaction of dead organic matter and have no necessary action on bacteria.

Fresh air, sunshine, light, and cleanliness are all essential in the prevention of sickness, and they all help towards the enfeebling and suppression of the germ, but the microbe's ubiquity and great power of endurance render some chemical agent necessary for their destruction.

The following are the requisites of a good disinfectant.

1. It must be a real and active germicide, capable, even in dilute solutions, of destroying all kinds of bacteria.

2. It must retain its efficiency in the presence of organic matter.

3. It must be non-poisonous in every practical and reasonable way.

4. It must be free from any caustic action on the skin even in a pure state, not only for the patient's sake, but to maintain the delicacy of touch necessary for the nurse.

5. It must be readily soluble in water, so as to be capable of diffusion in a diluted condition over large areas.

6. It must be cheap if intended to be generally and extensively used.

7. It is desirable that it should not stain linen or destroy colour.

8. It is of the greatest importance that it should be wholly uninfluenced in its action by the presence of either soap or serum.

In hospitals, where there is practically an inexhaustible supply of hot water, this last consideration is not so important, but in the case of a poor home where, perhaps, only a kettleful of water can be procured, which must serve for the washing and cleansing of the wound, also for rinsing away the soap used for this purpose, there is grave objection to the use of any disinfectant of the nature of perchloride of mercury which is absolutely useless in the presence of blood-serum or of soap.

The choice of disinfectants is of great importance, and medical opinion concerning them has greatly changed during recent years. At one time it was believed that the coal-tar disinfectants, for example, depended for their efficacy upon the carbolic or cresylic acid which they contained, and that a direct ratio existed between the efficiency and the quantity present. Now, it must be remembered that the disinfectant value of a solution does not necessarily vary with its concentration, and that for many solutions there is a point beyond which increased concentration not only does not add to, but actually reduces their disinfecting effect.

Carbolic, cresylic, and other coal-tar acids, which have been in use for many years are to a very large extent being superseded by more powerful germicides which are less poisonous both to mankind and animals.

In 1903 the Rideal-Walker test was instituted, and the comparative germicidal values of various disinfectants was tried, with the result that the aforesaid acids were found wanting in some of the necessary qualifications.

The precise mode of action of disinfectants must necessarily be various in character. For instance, in addition to its valuable power of oxidation, peroxide of hydrogen acts as a direct poison to germs of the putrefactive type, but it asphyxiates some microbes by its active oxygen, just as carbolic acid acts as a direct poison to man. Some preparations (such as pyrogalllic acid) act in exactly opposite manner—namely, by absorbing the oxygen necessary for the life of the microbe. Other chemical agents (such as tannin and alum) render the medium in which the

germs exist unfit for their further sustenance and thus starve them out of existence.

CARBOLIC ACID

DISADVANTAGES. Stains linen, burns skin, is poisonous, and is not easily made soluble, therefore not so much used as formerly.

THE USES

1. DISINFECTANT SHEET OUTSIDE SICKROOM DOOR.

$\frac{1}{2}$ -pint to 1 gallon of water, the sheet to be kept moist.

2. STEEPING PATIENT'S BODY AND BED LINEN.

$\frac{1}{2}$ -pint to 1 gallon of water, steep one hour in sickroom before removing for boiling.

3. IN CASE OF DEATH.

1 pint to 1 gallon of water for disinfecting sheet to be wrapped round the body.

4. RINSING INSTRUMENTS AND SPONGES.

1 in 20 or 2 tablespoonsful to 1 pint of water.

5. DISINFECTING BED-PANS BEFORE AND AFTER USE.

1 in 20.

6. WASHING HANDS OR WOUNDS.

1 in 40 or 1 tablespoonful to 1 pint water.

N.B.—Always use boiling water to add to carbolic acid as it then mixes more thoroughly.

CYLLIN. ($\frac{2}{6}$ per quart.)

This useful and popular disinfectant is produced from a new series of oxidized hydrocarbons which combines great germicidal power with no causticity or poison towards the higher forms of life. It is an aromatic preparation which is so saponified as to yield a perfect emulsion on the addition of water, and is guaranteed to be permanently homogenous. It is also a very inexpensive fluid. It can be used in suitable dilution with any form of spraying apparatus, and is non-volatile. It causes no irritating fumes.

It may be obtained also in powder form, and is one of the most satisfactory forms of a powder disinfectant. Lime is the

most suitable base for such powders, owing to its power of absorbing evil-smelling gases. With carbolic acid and other substances which react with lime, the use of this base is not admissible, but as cyllin has no reaction lime is readily used with it.

Five forms of cyllin soap are to be obtained, namely, surgical, toilet, bar, soft, and liquid soaps ; these are all guaranteed to be equal to 50 per cent. carbolic, and perfectly free from any undesirable action on the skin.

It is also prepared for use in an inhaler, as it is of great help in pulmonary disease, causing no irritating effect on the lungs or air passages.

For internal disinfection it may be bought either in capsules (palatinoids) or in the form of a syrup.

DIRECTIONS FOR ITS USE. In consequence of the presence of lime in varying proportions in ordinary tap water, clean soft water should be used for dilution.

QUANTITIES

Cesspools, sinks, and lavatories	2 teaspoonsful	to 1 quart	water.
Spittoons or mugs for infected expectoration	1 teaspoonful	to 1 pint	„
Bedpans	1	„	1 quart „
Floors	1	„	1 „ „
Spray for walls	1	„	1 „ „
For the skin	1	„	2 quarts „
Soiled sheets or body linen, 1 tablespoonful	to 4	„	„

JEYES' FLUID

To many people the fact that this has held the Royal Warrant for three successive reigns may be an evidence of its value ; it is also spoken of highly by many eminent medical men.

ADVANTAGES

1. It is non-poisonous, and may be used by inexperienced persons.
2. Even in a pure state it has no corrosive action.
3. It is highly concentrated, and may be diluted with from 1 to 500 parts water.

4. It is cheap, a shilling bottle producing from 6 to 30 gallons of disinfectant.

5. It mixes in the form of an emulsion, and is therefore adapted for spraying.

6. It kills germs promptly, also spores upon which some disinfectants have not a complete action.

7. It also has a deodorant action.

QUANTITIES

Sinks, commodes, water-closets, drains, 1 in 100 = 1 tablespoonful to $2\frac{1}{2}$ pints water.

CLOTHING 1 in 200 or 1 tablespoonful to 5 pints water.

Laundry work 1 in 2560 or 1 teaspoonful to 2 gallons water.

Floors, wainscot, etc. 1 in 100.

SANITAS

Sanitas fluid is eminently suited as a disinfectant for popular and medical use, inasmuch as it is wholly harmless, also thoroughly reliable both as (1) a germicide, (2) an antiseptic, and (3) as an oxidant it vitalizes and purifies the air.

It is prepared in various forms—sanitas fluid, sanitas-bactox, sanitas-okol—and is used for the same purposes as the foregoing.

It may be of interest to note that : A 20 per cent. solution of sanitas fluid kills the typhoid bacillus in from $2\frac{1}{2}$ to 5 minutes.

A 40 per cent. solution kills the diphtheria bacillus in 15 to 20 minutes ; the pure sanitas fluid killing it in less than one minute.

Sanitas fluid when used as a spray kills the typhoid bacillus on a papered wall in between 20 and 30 minutes.

FORMALIN

Formalin is a chemical compound of great use as a disinfectant. Clothes, slates and pencils may be steeped in a solution of it (1 in 40) and are then guaranteed to be immune from infection ; it is also used in the same proportion for spraying walls.

If a gaseous disinfectant is desired the best probably is formaldehyd, as it is a very active germicide when diffused with steam into the air ; for good results, however, a plentiful supply of formalin must be used.

Special lamps are prepared for the use of formalin, called Alformant A, costing 9/-. They are small and portable, easily worked, clean, effective, and do not affect textures or colours. Fifteen or twenty formalin tablets to every 1000 cubic feet of space to be disinfected are placed in the receptacle of the lamp, which is lighted with methylated spirit. An ordinary artisan's bedroom is usually about 1500 cubic feet, and would therefore require twenty-five tablets. Each Alformant A is capable of gasifying up to 140 tablets at a time, and is therefore sufficient for a room of 7000 cubic feet. The room must be kept as airtight as possible for from three to six hours.

THE VAPLAMP

McDougall's small vaplamp is most convenient for a room of 1200 cubic feet space ; it costs 1/-, and simply requires to be lighted in the airtight room.

SULPHUR FUMES

Fumigating with sulphur, though still sometimes employed, no longer enjoys such a large vogue, and by many medical men its use is being discontinued. (See p. 48 for method of fumigating.)

DISADVANTAGES

1. It bleaches wall-papers, paint, and materials.
2. It injures gilt frames and book-bindings.
3. It greatly irritates the throat and nose.
4. Its germicidal action cannot be absolutely relied upon, as it sometimes fails to penetrate the envelope of organic matter with which bacteria are usually surrounded.

Its use is solely for unoccupied rooms after an infectious illness, and takes the form of—

1. Sulphur fumes ($1\frac{1}{2}$ lbs. of sulphur for a medium-sized room).
2. Sulphur candles, burning six hours.
3. Sulphur cakes.

PERCHLORIDE OF MERCURY

This is thirty-seven times more powerful in its action than carbolic acid, but is a most deadly poison. It does not stain linen or irritate the skin, but injures gold, therefore all rings should be taken from the fingers. It is not advisable to use this disinfectant except under medical direction.

CONDY'S FLUID

This well-known liquid, and also permanganate of potash (1 oz. crystals to 3 pints water), are useful in any of the before-mentioned ways.

GREEN COPPERAS OR SULPHATE OF IRON

PROPORTION. $1\frac{1}{2}$ lbs. (6*d.*) mixed with 1 gallon water.

USE. Pour 1 teacupful into bed-pans before and after use, covering, and allowing it to stand ten minutes before the contents enter the drain.

FORMAMINT

FORMAMINT contains a powerful antiseptic blended in a pleasing manner with milk, sugar and mild flavouring agents. It is not only a soothing and healing remedy for inflammatory conditions of the mouth and throat, but is also an antiseptic. It also has a preservative effect on the teeth and gums, thereby helping to prevent unpleasant breath. It is superior to gargles, as it causes less strain on the neck and throat, and also possesses a highly penetrative power. The tablets are slowly sucked in order to obtain the fullest benefit.

IODINE

Among the surgical profession iodine as an antiseptic is growing in favour. In the recent Servo-Turkish war it was used exclusively for the cleaning of wounds and in preparing the skin for an operation. An alcoholic solution must be used, as a watery solution is of no value. The strength recommended is from 2 to 4 per cent., according to the purpose for

which it is required. Methylated spirit is best for this purpose, but whisky or any strong form of alcohol may be used. To reduce a strong solution of iodine to a 4 per cent. solution add five volumes of alcohol to two of iodine. For 2 per cent. solution add five volumes of alcohol to one of iodine. (Ordinary tincture of iodine is $2\frac{1}{2}$ per cent. solution.)

In treating a wound, whether septic or apparently clean, wash it with cool boiled water (containing a disinfectant) or boracic lotion. Then with a small piece of lint apply 2 per cent. iodine to the raw surface. Any ordinary dressing may then be used, such as iodoform gauze or double cyanide.

CHLORIDE OF LIME

This being cheap is exceedingly useful for disinfecting ashbins, ashpits, and middens. Only the best quality should be bought, and it should be kept in stoppered bottles or jars, as if stored in paper it becomes useless having lost its strength.

CHLORIDE OF ZINC

This will be found useful for mugs in which infected expectoration is received.

NITROUS ACID FUMES

Dilute a little nitric acid, pouring it into a saucer, then place a small piece of copper in it.

EUCHLORINE.

Pour some strong hydrochloric acid into a glass, add to it from time to time a few grains of chlorate of potash.

These two last-mentioned disinfectants are used to disinfect the air in a sickroom and should be placed at a considerable height.

In addition to chemical disinfectants, we must not omit to mention disinfection (1) by boiling ; (2) by extreme cold—this, however, is not reliable or practicable ; (3) by intense heat.

PUBLIC DISINFECTION

All clothing, books, and bedding, etc., should be sent to the public disinfecting station, there to be subjected to intense heat.

THE WASHINGTON LYONS' DISINFECTOR is one of the best. It consists of a jacketted chamber with a door at both ends. Steam is admitted to the jacket at a higher pressure, and consequently at a higher temperature than that admitted to the inner chamber, thus preventing condensation on the inner walls of the apparatus. In producing a vacuum the air is removed from the chamber and from the interstices of the clothing by means of a vacuum-producing apparatus or air pump, the result being the moment either hot air or steam is admitted to the chamber the goods are at once penetrated and the disinfecting action of the great heat is rendered absolutely certain. In the inner chamber the heat is 260° Fahr. or 20 lbs. pressure. In the jacket the heat is 268° Fahr. or 25 lbs. pressure. This process takes thirty-five minutes to thoroughly disinfect all articles subjected to it. Leather boots, felt hats, etc., would be rendered shrivelled and useless, they are therefore treated with formalin.

Book and papers may be suspended on lines across a room when the premises are being disinfected with formaldehyd, or may be placed on end with open pages in an air-tight receptacle and then subjected to the action of formaldehyd for twenty-four hours.

In conclusion, one can only say that owing to the enormous number of disinfectant, antiseptic, and deodorant preparations on the market it is impossible to mention more than a few of the most important, but any reliable chemist will always willingly recommend any appropriate compound, giving full directions for its use.

CHAPTER XXXVI

Notification and Prevention of Diseases

*Epitome of the Infectious Diseases (Notification) Act, 1889,
52 and 53 Vict. c. 72—Specimen of Municipal Regulations.*

I. NOTIFICATION OF INFECTIOUS DISEASE

After the said 16th day of December, 1889, where an inmate of any *building* used for human habitation within the district of the said Local Authority is suffering from any of the *Infectious Diseases* hereinafter mentioned, then (unless such building is a hospital in which persons suffering from an Infectious Disease are received) the following provisions shall have effect:—

1. (1) The head of the family to which such inmate (hereinafter called the patient) belongs, and in his default
- (2) The nearest relatives of the patient present in the *building*, or being in attendance on the patient, and in default of such relatives
- (3) Every person in charge of, or in attendance on the patient, of any such person
- (4) The *occupier* of the *building*,

shall, as soon as he becomes aware that the patient is suffering from such *Infectious Disease*, send notice thereof to the Medical Officer of Health.

2. Every Medical Practitioner attending on, or called in to visit the patient, shall forthwith, on becoming aware that the

patient is suffering from such *Infectious Disease*, send to the Medical Officer a certificate stating the name of the patient, the situation of the *building*, and the *Infectious Disease* from which the patient is suffering. Forms of Certificate for use by Medical Practitioners will be supplied gratuitously on application to the Medical Officer of Health.

For each such Certificate duly sent by a Medical Practitioner he will be entitled to receive from the Local Authority a fee of 2/6 if the case occurs in his private practice, and 1/- if it occurs in his practice as Medical Officer of any public body or institution.

NOTICES AND CERTIFICATES. These may be in writing or in print, or partly in writing and partly in print. They may be sent by being delivered to the Medical Officer of Health, or being left at his office, or may be sent by post addressed to him at his office. In cases of urgency the Medical Officer of Health may be communicated with by Telephone.

PENALTIES. Every person required to give a Notice or Certificate as above-mentioned, who fails to give the same, is liable on summary conviction to a fine not exceeding 40/-.

DEFINITION OF "INFECTIOUS DISEASE." "Infectious Diseases" includes the following diseases : Smallpox ; Cholera ; Diphtheria ; Membranous ; Croup ; Erysipelas ; the disease known as Scarlatina or Scarlet Fever ; the fevers known by any of the following names : Typhus, Typhoid, Enteric, Relapsing, Continued, or Puerperal.

Medical Practitioners are particularly requested to forward Notifications immediately on becoming aware that the patient is suffering from an *Infectious Disease* to which this Act applies.

II. A SPECIMEN OF MUNICIPAL REGULATIONS

Your attention is particularly directed to the following provisions of the Public Health Act, of the Infectious

Disease (Prevention) Act, and of the Factory and Workshop Act, 1901, so far as they relate to the prevention of the spread of Infectious Diseases—

Any person who

- (1) While suffering from any dangerous infectious disorder wilfully exposes himself without proper precautions against spreading the said disorder in any street, public place, or vehicle, or enters any public conveyance without previously notifying to the owner, conductor or driver thereof that he is so suffering ; or
- (2) Being in charge of any person so suffering, so exposes such sufferer ; or
- (3) Gives, lends, sells, or transmits, or exposes without previous disinfection, any bedding, clothing, rags, or other things which have been exposed to infection, shall be liable to a penalty not exceeding Five Pounds.

Every person who shall cease to occupy any house, room, or part of house in which any person has, within six weeks previously, been suffering from any infectious disease, without having such house, room, or part of a house, and all articles therein liable to retain infection, disinfected to the satisfaction of a registered medical practitioner, as testified by a certificate signed by him, or without first giving to the owner of such house, room, or part of a house, notice of the previous existence of such disease ; and every person ceasing to occupy any house, room, or part of a house, and who, on being questioned by the owner thereof, or by any person negotiating for the hire of such house, room, or part of a house, as to the fact of there having within six weeks previously been therein any person suffering from any infectious disease, knowingly makes a false answer to such question, shall be liable to a penalty not exceeding Ten Pounds.

Any Local Authority, or the Medical Officer of any Local Authority, generally empowered by the Authority in that behalf, may, by notice in writing, require the owner of any bedding,

clothing, or other articles which have been exposed to the infection of any infectious disease, to cause the same to be delivered over to an Officer of the Local Authority for removal for the purpose of disinfection, and any person who fails to comply with such requirement, shall be liable to a penalty not exceeding Ten Pounds.

INFECTED DWELLINGS.—If any occupier of a factory or workshop, or laundry, or any place from which any work is given out, or any contractor employed by any such occupier, causes or allows wearing apparel to be made, cleaned, or repaired in any dwelling-house or building occupied therewith, whilst any inmate of the dwelling-house is suffering from any infectious disease, he shall be liable to a fine not exceeding Ten Pounds.

PRECAUTIONS TO BE OBSERVED IN CASES OF INFECTIOUS DISEASE

1. Patients suffering from Scarlet Fever, Smallpox, Diphtheria, or Typhoid Fever should, if possible, be at once removed to the Isolation Hospital.

2. Where Smallpox, Scarlet Fever, or Diphtheria are treated at home no child should be allowed to attend school until the infected premises and articles have been disinfected, and until a *certificate of re-admission* has been obtained from the Medical Officer of Health.

3. Children must not attend an *Infants'* School from a house where there is a case of Measles, but children in departments for older scholars, who have previously suffered from the disease, need not be excluded under similar circumstances.

4. After Scarlet Fever and Diphtheria, seven days should elapse since the date of disinfection before children from the infected dwelling attend school. After Smallpox eighteen days should elapse.

5. The same periods of exclusion from school should be allowed after school children have been discharged from the Isolation Hospital, *i.e.*, Scarlet Fever and Diphtheria *seven*

days, Smallpox *eighteen days*, and a *certificate of re-admission* to school should be obtained from the Medical Officer of Health.

6. *If treated at home* the patient should be isolated from the rest of the inmates, except those who are in immediate attendance, and should be placed in a well-ventilated room at the top of the house. A sheet should be hung up outside the door of the sickroom and kept wet with a solution of carbolic acid, half-pint to a gallon of water, or with some other recognized disinfectant. A fire should be lighted in the sickroom if the weather permit, and windows should be opened.

7. All bed and body linen, as soon as removed from the sick person, and before being taken from the sickroom, should first be put in a solution of carbolic acid of the above-named strength, or into some other disinfectant, remaining there for an hour, and afterwards boiled in water.

8. All discharges from the patient should be received into vessels containing some suitable disinfectant, and should be removed from the sickroom and disposed of without delay.

9. If the disease is Smallpox any unvaccinated infants in the house should be at once vaccinated, and all adults and young persons over twelve years of age should be re-vaccinated, and kept under medical observation until a period of eighteen days has elapsed since the latest possible date of infection.

10. The sickroom should not be visited by any but those in attendance on the patient, as the clothing of the visitors is very liable to convey infection.

11. In case of death, the body should be completely enveloped in a sheet steeped in a strong solution of carbolic acid (one pint to a gallon of water), placed in a coffin, with a pound or two of carbolic acid powder sprinkled over it, fastened down and buried without delay.

12. *On the termination of a case*, the sickroom, the clothing, and everything with which the patient has come in contact, must be thoroughly disinfected. *Notice should be sent* to the

Medical Officer of Health, who will send an Inspector to superintend the process of disinfection. It should be remembered that exposure to fresh-air and sunlight rapidly destroys the germs of infectious diseases, and that extreme cleanliness is an efficient disinfectant.

13. Infected clothing, bedding, and other articles must be given to the Inspector, who will cause them to be removed to the public Disinfecting Station, where they will be disinfected free of charge, after which they should be thoroughly washed at home. Infected clothing should not on any account, or under any pretence whatever be sent to a laundry, and if clothes are received to wash, they should not be received until the house is pronounced free from infection.

14. A person suffering from Scarlet Fever is generally dangerous to others for six or eight weeks, and must not be allowed to mix with other people until after the disinfection of the premises or while there is any discharge from the ears or nose.

15. A person suffering from Diphtheria is generally dangerous to others for a period of at least three weeks, and must not be allowed to mix with others during that period, or while there is any sore throat or discharge from the ears or nose, or while Diphtheria germs are found on bacteriological examination. Such examinations are made free of cost at the Public Health Laboratory by arrangement with the medical attendant of the patient.

16. Books obtained from the Free Library should be handed to the Disinfecter.

WHOOPIING COUGH

Whooping Cough, as it affects young children, is a very dangerous and fatal infectious disease.

In every case parents should, without delay, seek medical advice.

Whooping Cough frequently leads to dangerous and fatal forms of inflammation of the lungs and bronchitis.

Children showing any symptoms of the disease should be warmly clad and kept in a warm but well-ventilated room for

at least six weeks. Plenty of pure fresh air should be admitted to the room, which should be kept scrupulously clean.

The patient should be separated from other children for as long as the Whoop continues, and not less than five weeks from the commencement of the Whooping Cough, during which period he must not attend school.

After recovery, the room occupied by the patient should be thoroughly washed with soap and hot water. Bed linen and washable articles used by the patient should if possible be boiled for twenty minutes.

Other children of the same household who have previously had Whooping Cough may attend the Boys' or Girls' Department of Schools; those who have not had the disease must be kept at home for a fortnight, and may then return to school provided they have no cough.

No children from the infected household may attend the Infants' Department of any School until the complete recovery of the patient.

MEASLES

In every case of Measles or suspected Measles, a medical man should be sent for.

Measles is exceedingly fatal amongst young children; all such cases, therefore, require early medical treatment and careful nursing.

Children suffering from the disease should be kept in a well-ventilated and warm room—(temperature 65° F.)

The patient should be separated from all other children for at least three weeks after the appearance of the rash.

The early symptoms of Measles are sneezing, coughing, and watery secretions from eyes and nose.

When the early symptoms appear, the patient should be separated from other children, when, if the disease prove to be Measles, the rash will have appeared.

When the patient has recovered, disinfect the sickroom by washing the floor, walls, and furniture (as far as possible) with soap and hot water. Infected articles of clothing and bedding should be boiled for an hour; and, under medical advice, any such articles may be sent to the Disinfecting Station on application being made to the Medical Officer of Health.

Children who have already had Measles may be allowed to attend the Boys' and Girls' Departments of Schools, but no children living in houses in which there are cases of Measles may attend the Infant Department.

NOTE.—Persons are liable to a fine of £5 for exposing in the street, or in any public place or conveyance, infected persons and things.

INSTRUCTIONS TO TEACHERS AND PARENTS

Disease.	Period of exclusion from school of children suffering from the disease.
SCARLET FEVER OR SCAR-LATINA	At least six weeks, and until there is no discharge from the throat, nose, or ears, and no peeling of the skin. A certificate of disinfection will be given by the Medical Officer of Health.
DIPHTHERIA	Until throat is reported healthy. Bacteriological examination desirable. A certificate of disinfection will be given by the Medical Officer of Health.
SMALL-POX	Until scabs have gone and skin is healthy. A certificate of disinfection will be given by the Medical Officer of Health.
MEASLES OR GERMAN MEASLES	Three weeks from appearance of rash.
CHICKEN-POX	Until scabs have gone and skin is healthy.
WHOOPIING COUGH . . .	Until cough is completely gone—at least five weeks.
MUMPS	At least three weeks.
ENTERIC OR TYPHOID FEVER	Until the child is well. A certificate of disinfection will be given by the Medical Officer of Health.
RINGWORM	Until no broken off or diseased hairs can be seen and until a microscopical examination reveals no evidence of the presence of ring-worm fungus.
ITCH (Scabies)	Until all pimples and itching have disappeared.
LICE IN HEAD (Pediculosis Capitis)	Until all vermin have been removed.
OPHTHALMIA	Until the eyes have been free from discharge for at least a month.

FOR DEALING WITH INFECTIOUS DISEASE.

Period of exclusion from school of children who are not ill, but who reside in infected houses.	Remarks.
Eight days from last exposure to infection when case is removed to Isolation Hospital. In other cases until Medical Officer of Health gives certificate of disinfection.	These diseases are notified by Medical Practitioners to the Medical Officer of Health.
Eight days from last exposure to infection when case is removed to Isolation Hospital. In other cases until Medical Officer of Health gives certificate of disinfection.	
Eighteen days from last exposure to infection, and until Medical Officer of Health gives certificate of disinfection.	
Sixteen days from last exposure to infection.	All children from houses in which there is any such disease must be excluded from school. These diseases are not notified by Medical Practitioners to the Medical Officer of Health, but should be notified by Head Teachers. Children must not attend an infants' school from a house where there is a case of any such disease, but children in departments for older scholars, who have previously suffered from the disease in question, need not be excluded under similar circumstances.
Eighteen days from last exposure to infection.	
Twenty-one days from last exposure to infection.	
Twenty-one days from last exposure to infection.	
Need not be excluded.	This disease is notified by Medical Practitioners to the Medical Officer of Health.
Need not be excluded.	—
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